Bonneville Power Administration
Power Business Line

2002 Initial Power Rate Proposal
Revenue Requirement Study

WP-02-E-BPA-02
August 1999

2002 REVENUE REQUIREMENTS STUDY
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GRAPHIC PRESENTATIONS

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COMMONLY USED ACRONYMS

AANR	Audited Accumulated Net Revenues
AER	Actual Energy Regulation
AFUDC	Allowance for Funds Used During Construction
AGC	Automatic Generation Control
aMW	Average Megawatt
ANRT	Accumulated Net Revenue Threshold
AOP	Assured Operating Plan
ASC	Average System Cost
BASC	BPA Average System Cost
BO	Biological Opinion
BPA	Bonneville Power Administration
Btu	British Thermal Unit
California PX	California Power Exchange
C&R Discount	Conservation and Renewables Discount
CBP	Columbia Basin Project
Cfs	cubic feet per second
CCCT	Combined-Cycle Combustion Turbine
CEC	California Energy Commission
COB	California-Oregon Border
COE	U.S. Army Corps of Engineers
Con/Mod	Conservation Modernization Program
COSA	Cost of Service Analysis
CRAC	Cost Recovery Adjustment Clause
CRC	Critical Rule Curves
CSPE	Columbia Storage Power Exchange
CT	Combustion Turbine
CY	Calendar Year (Jan-Dec)
DC	Direct Current
DDC	Dividend Distribution Clause
DOE	Department of Energy
DSIs	Direct Service Industrial Customers
ECC	Energy Content Curve
EIA	Energy Information Administration
Energy Northwest	Formerly Washington Public Power Supply System (Nuclear) Project
F&O	Financial and Operating Reports
FBS	Federal Base System
FCCF	Fish Cost Contingency Fund
FCRPS	Federal Columbia River Power System
FELCC	Firm Energy Load Carrying Capability
FERC	Federal Energy Regulatory Commission
Fourth Power Plan	NWPPC's Fourth Northwest Conservation and Electric Power Plan
FPS	Firm Power Products and Services (rate)
FSEA	Federal Secondary Energy Analysis
FY	Fiscal Year (Oct-Sep)

GRI	Gas Research Institute
GRSPs	General Rate Schedule Provisions
GWh	Gigawatthour
HELM	Hourly Electric Load Model
HLH	Heavy Load Hour
IJC	International Joint Commission
IOUs	Investor-Owned Utilities
IP	Industrial Firm Power (rate)
ISO	Independent System Operator
KAF	Thousand Acre Feet
kcfs	kilo (thousands) of cubic feet per second
ksfd	thousand second foot day
kV	Kilovolt (1000 volts)
kW	Kilowatt (1000 watts)
kWh	Kilowatthour
LDD	Low Density Discount
LLH	Light Load Hour
L/R Balance	Load/Resource Balance
MAF	Million Acre Feet
m/kWh	Mills per kilowatthour
MC	Marginal Cost
MCA	Marginal Cost Analysis
MCS	Model Conservation Standards
MIP	Minimum Irrigation Pool
MMBTU	Million British Thermal Units
MOP	Minimum Operating Pool
MW	Megawatt (1 million watts)
MWh	Megawatthour
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Council
NF	Nonfirm Energy (rate)
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NOB	Nevada-Oregon Border
NORM	Non-Operating Risk Model
NR	New Resource Firm Power (rate)
NTSA	Non-Treaty Storage Agreement
NUG	Non-Utility Generation
NWPP	Northwest Power Pool
NWPPC	Northwest Power Planning Council
NWPPC C&R	Northwest Power Planning Council Cost and Revenues Analysis
O&M	Operation and Maintenance
OY	Operating Year (Aug-Jul)
PBL	Power Business Line
PDP	Proportional Draft Points

PDR	Power Discharge Requirement
PF	Priority Firm Power (rate)
PFBC	Pressurized Fluidized Bed Combustion
PMDAM	Power Marketing Decision Analysis Model
PNCA	Pacific Northwest Coordination Agreement
PNUCC	Pacific Northwest Utilities Conference Committee
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
PSW	Pacific Southwest
PURPA	Public Utilities Regulatory Policies Act
PUD	Public or People's Utility District
RAM	Rate Analysis Model (computer model)
Reclamation	Bureau of Reclamation
RFP	Request for Proposal
RISKMOD	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model
RL	Residential Load (rate)
RMS	Remote Metering System
ROD	Record of Decision
REP	Residential Exchange Program
SCCT	Single-Cycle Combustion Turbine
TAC	Targeted Adjustment Charge
TBL	Transmission Business Line
tcf	Trillion Cubic Feet
TPP	Treasury Payment Probability
TRL	Total Retail Load
UDC	Utility Distribution Company
USFWS	U.S. Fish and Wildlife Service
URC	Upper Rule Curve
WEFA	WEFA Group (Wharton Econometric Forecasting Associates)
WY	Watt-Year
WPRDS	Wholesale Power Rate Development Study
WSCC	Western Systems Coordinating Council
WSPP	Western System Power Pool

1. INTRODUCTION

1.1 Purpose and Development of the Revenue Requirement Study for Generation

The purpose of this Study is to establish the level of revenues from wholesale power rates necessary to recover, in accordance with sound business principles, the Federal Columbia River Power System (FCRPS) costs associated with the production, acquisition, marketing, and conservation of electric power. The generation revenue requirements herein include: recovery of the Federal investment in hydro generation, fish and wildlife recovery, and conservation; Federal agencies' operations and maintenance (O&M) expenses allocated to power; capitalized contract expenses associated with such non-Federal power suppliers as the Energy Northwest (formerly known as Washington Public Power Supply System); other purchase power expenses, such as short-term power purchases; power marketing expenses; cost of transmission services necessary for the sale and delivery of FCRPS power; and all other generation-related costs incurred by the Administrator pursuant to law.

The cost evaluation period, as defined by the Federal Energy Regulatory Commission (FERC), is the period extending from the last year for which historical information is available, through the proposed rate test period. The cost evaluation period for this rate filing includes Fiscal Years (FY) 1999 - 2006. The Study is based on generation revenue requirements for the rate test period FY 2002 – 2006, including the results of generation repayment studies. This Study does ***not*** include revenue requirements or a cost recovery demonstration for the Bonneville Power Administration's (BPA) transmission function.

The Study outlines the policies, forecasts, assumptions, and calculations used to determine revenue requirements. Legal requirements are summarized in Chapter 5 of this Study. Volumes 1 and 2 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A and B, respectively, contain key technical assumptions and calculations, the results of the generation repayment studies, and a further explanation of the repayment program and its outputs.

Revenue requirements were developed using a cost accounting analysis comprised of three parts. First, repayment studies for the generation function were prepared to determine the schedule of amortization payments and to project annual interest expense for bonds and appropriations that fund the Federal investment in hydro, fish and wildlife recovery, conservation, and related generation assets. Repayment studies are conducted for each year of the rate test period, and cover the 50-year repayment period. Second, generation operating expenses and minimum required net revenues are projected for each year of the rate test period. Third, annual planned net revenues for risk are determined taking into account risks, BPA's cost recovery goals, and risk mitigation measures. From these three steps, revenue requirements are set at the revenue level necessary to fulfill cost recovery requirements and objectives. *See* Figure 1, Generation Revenue Requirement Process.

Normally, BPA conducts a current revenue test to determine whether revenues projected from current rates can meet cost recovery requirements. If the current revenue test indicates that cost recovery and risk mitigation requirements can be met, current rates could be extended. However, BPA's Subscription Strategy is driving a substantial restructuring of generation products and services, and the Fish and Wildlife Funding Principles require BPA to achieve a specific Treasury Payment Probability (TPP). The need to incorporate these significant policies in the development of wholesale power rates makes the results of this current test immaterial.

Consistent with RA 6120.2 and the standards applied by FERC on review of BPA's rates, the adequacy of proposed rates must be demonstrated. The revised revenue test determines whether projected revenues from proposed rates will meet cost recovery requirements and objectives for the rate test and repayment period. The revised revenue test, contained in Chapter 4.3 of this Study, demonstrates that revenues from the proposed wholesale power rates will recover generation costs in each year of the rate test period and over the ensuing 50-year repayment period. Rate test period costs are projected to be recovered with a very high confidence level--an 88 percent probability that United States (U.S.) Treasury payments in the generation function will be recovered on time and in full through wholesale power rates over the five-year rate period. *See* Chapter 2.2 of this Study; and DeWolf, *et al.,* WP-02-E-BPA-13.

Table 1 summarizes the revised revenue test and shows projected net revenues from proposed rates over the five-year rate period. In combination with other risk mitigation tools, these net revenues are set at the lowest level necessary to achieve BPA's cost recovery objectives in the face of large hydro condition uncertainty, fish and wildlife recovery cost uncertainty, market price volatility, and other risks.

Table 1

PROJECTED NET REVENUES FROM PROPOSED RATES

($000s)

Fiscal Year		Generation
2002	Projected Revenues From Proposed Rates	2,474,596
	Projected Expenses	2,316,122
	Net Revenues	**158,474**
2003	Projected Revenues From Proposed Rates	2,494,261
	Projected Expenses	2,382,592
	Net Revenues	**111,669**
2004	Projected Revenues From Proposed Rates	2,456,270
	Projected Expenses	2,347,034
	Net Revenues	**109,236**
2005	Projected Revenues From Proposed Rates	2,487,226
	Projected Expenses	2,340,457
	Net Revenues	**146,769**
2006	Projected Revenues From Proposed Rates	2,507,271
	Projected Expenses	2,375,445
	Net Revenues	**131,827**
Average FYs 2002-2006	Projected Revenues From Proposed Rates	2,483,925
	Projected Expenses	2,352,330
	Net Revenues	**131,595**

The expected value of risk-adjusted reserves at the beginning of the rate period is $685.5 million, and at the end of the rate period is $1,258.3 million.

Of the $131,595 million average net revenues, approximately $127,000 is Risk Mitigation and $4,000 is for Amortization Payments.

Table 2 shows planned generation amortization payments to the U.S. Treasury during the rate test period.

Table 2

PLANNED AMORTIZATION PAYMENTS TO U.S. TREASURY
FYs 2002 – 2006 GENERATION REPAYMENT STUDIES

($000s)

Fiscal Year	Annual Amortization
2002	$107,208
2003	$72,482
2004 [1]	$91,785
2005	$148,319
2006	$126,242
Total	$546,036

Note: The total amortization is a $236.5 million increase over the five-year amount scheduled for generation in BPA's 1996 rate filing. This increase is due primarily to the structure of non-Federal debt and increasing repayment obligations for fish and wildlife recovery.

[1] Includes Irrigation Assistance payment of $739 ($000).

Figure 1 on the next page depicts the revenue requirement development process.

Figure 2 is a pie chart showing the components of the generation revenue requirements.

FIGURE 1

GENERATION REVENUE REQUIREMENT PROCESS

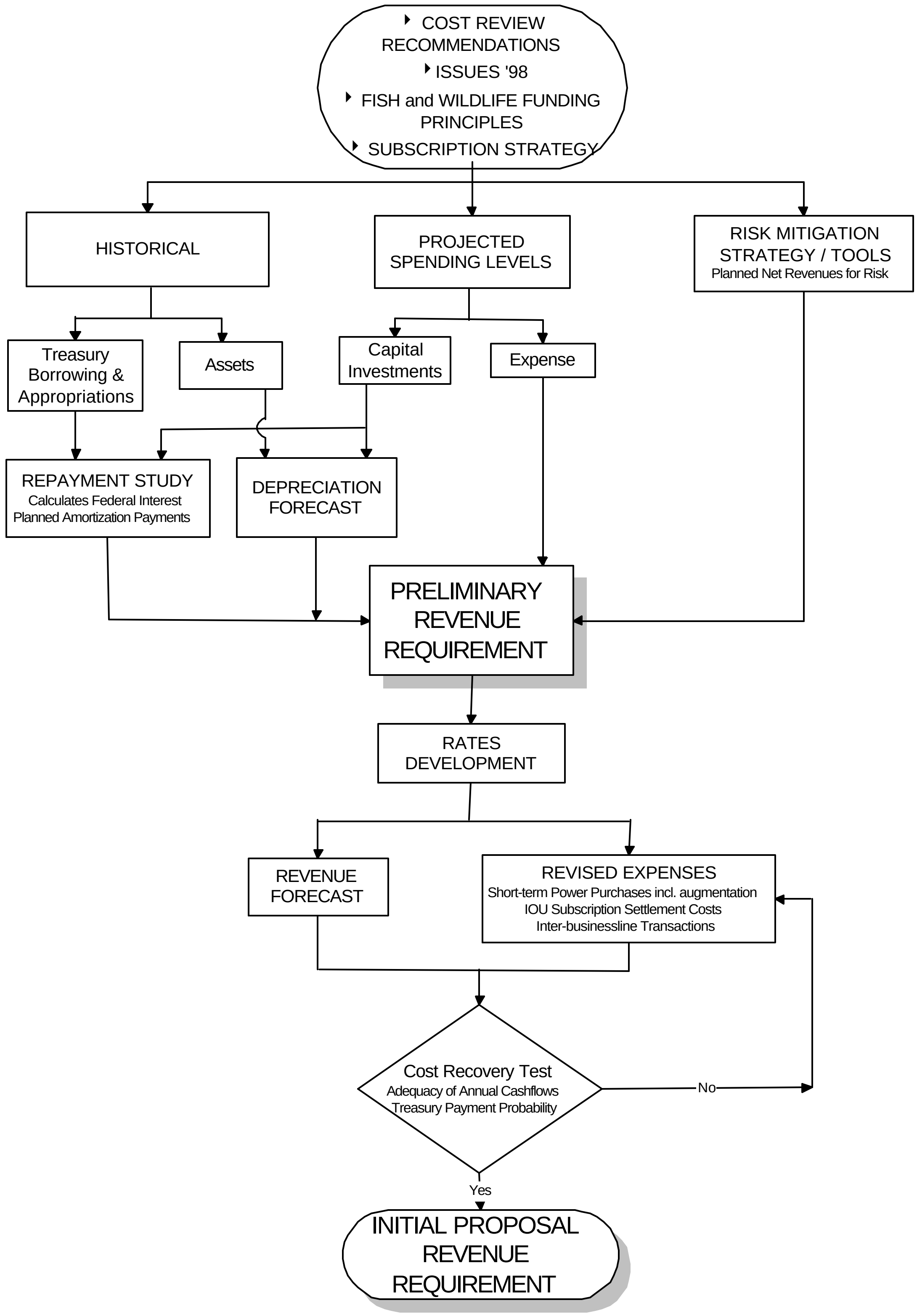
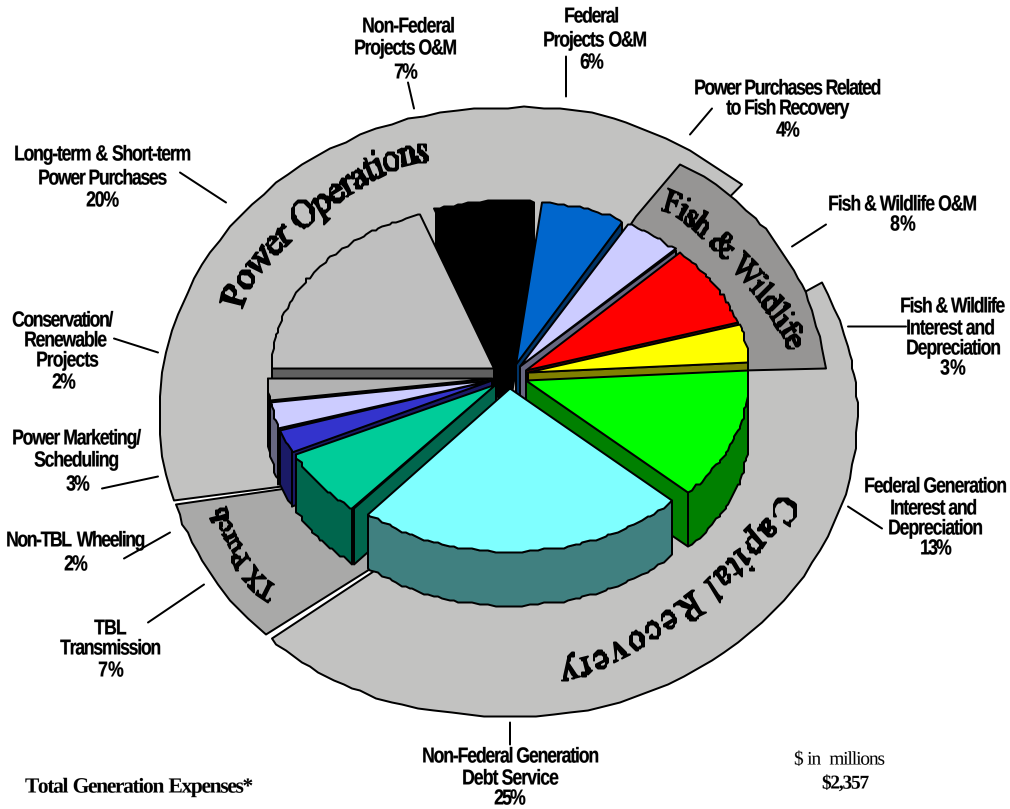


FIGURE 2

Composition of Generation Expenses
FY 2002-2006 Annual Averages



	$ in millions
Total Generation Expenses*	**$2,357**
Power Operations	
Power Marketing/Scheduling	$64
Conservation/Renewable Projects	$53
Long-term & Short-term Power Purchases	$460
Non-Federal Projects O&M	$176
Federal Projects O&M	$140
Power Purchases Related to Fish and Wildlife Recovery	$100
Total	$993
Capital Recovery	
Federal Generation Interest and Depreciation	$312
Non-Federal Generation Debt Service	$568
Fish & Wildlife Interest and Depreciation	$80
Total	$960
Other Fish and Wildlife	
Power Purchases Related to Fish and Wildlife Recovery **	$100
Fish & Wildlife O&M	$192
Fish & Wildlife Interest and Depreciation	$80
Total	$372
Transmission Purchases	
TBL Transmission	$160
Non-TBL Wheeling	$52
Total	$212

* Totals do not add due to overlapping of some FWL expenses

* * Estimate

Note: This graphic shows expenses only, and does not include the planned net revenues component of revenue requirements. As such, the percentages above do not represent estimated impacts on rates.

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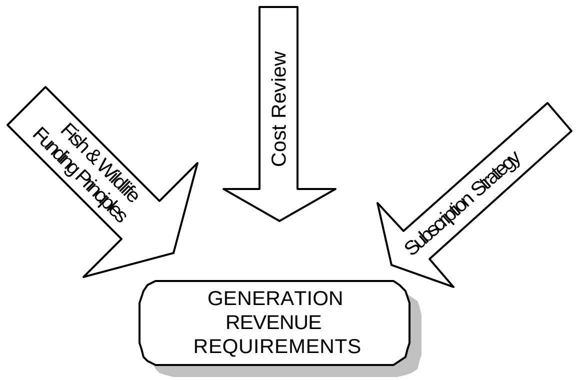
1.2 Public Involvement Process



Public Processes and the Revenue Requirement

BPA participated in several major public processes that have had, and will continue to have, significant impacts on its methods and costs of doing business. The Cost Review had the objective of ensuring that BPA's near- and long-term generation and transmission costs are as low as possible consistent with sound business practices, thereby facilitating full cost recovery with power rates at or below market prices. *See* Chapter 2 of this Study for a chronology of the spending level development process. The Cost Review's recommendations form the basis of these revenue requirements (with the updates reflected in Appendix A of this Study).

Another public process resulted in the adoption of a set of Fish and Wildlife Funding Principles (Principles). The Principles are intended to "keep the options open" for future fish and wildlife decisions that may affect hydrosystem operations and to accommodate the Northwest Power Planning Council's (NWPPC) Fish and Wildlife Program to be released in early 2000. The Principles provide assumptions on fish and wildlife recovery funding levels that BPA is to include in its revenue requirements, specify a cost recovery goal, and establish guidelines for risk mitigation measures. *See* DeWolf, *et al.*, WP-02-E-BPA-13.

BPA also conducted a public process to develop the Power Subscription Strategy. The Strategy addresses how those who receive the benefits of the region's low-cost Federal power should share a corresponding measure of the risks. It also seeks to implement the Subscription concept created by the Comprehensive Review in 1996 through contracts with regional customers for the sale of power and the distribution of Federal power benefits in the deregulated wholesale electricity market. Basic elements of the Subscription Strategy include the sale of power to meet the requirements of BPA's public agency customers while avoiding rate increases; a proposed settlement of the Residential Exchange Program with regional investor-owned utilities (IOU) that provides the equivalent of 1,800 average megawatt (aMW) of Federal power to residential and small farm consumers; sales to BPA's direct service industrial (DSI) customers; fulfillment of BPA's fish and wildlife obligations while assuring a high probability of Treasury repayment; and providing market incentives for the development of conservation and renewables. *See* Burns, *et al.*, WP-02-E-BPA-08.

These revenue requirements reflect savings recommended in the Cost Review, implements the Principles, and reflects the power purchases and residential exchange components of the Subscription Strategy.

2. SPENDING LEVEL DEVELOPMENT AND FINANCIAL POLICY

2.1 Development Process for Spending Levels

Development of spending levels reflected in these revenue requirements began with the Comprehensive Review of the Northwest Energy Systems (Comprehensive Review), which the governors of Idaho, Montana, Oregon, and Washington initiated in 1996 to seize opportunities and moderate risks presented by the transition of the region's power system to a more competitive electricity market. The Comprehensive Review recognized that this transition raised fundamental issues for BPA, including long-term competitiveness and risks with up to 90 percent of BPA's firm revenues at stake due to expiration of long-term power.

A theme of the Comprehensive Review was that BPA and the other entities of the FCRPS must effectively manage and control costs. The recommendations specifically called on BPA to "pursue all actions possible in the short-term to cut costs." This was seen as essential to making the proposed Subscription-based system for marketing Federal power successful. A successful Subscription was viewed as the most certain means of achieving the goals of the Comprehensive Review, which were: adding no risk for the U.S. Treasury and third-party bondholders; fulfilling responsibilities for funding fish and wildlife recovery; and retaining the substantial long-term benefits of the FCRPS for the Northwest.

The Comprehensive Review also recommended that:

- BPA not acquire any additional resources to serve load growth, except on a bilateral contract basis, where the purchaser bears the risk;

- BPA's financial support of conservation acquisitions be limited to current contractual obligations and certain market development activities, provided they were self-sustaining by FY 1999;

- BPA limit its support for conservation market transformation in proportion to the share of regional firm loads served by BPA;

- BPA's net loss from renewable resource development be capped at $15 million per year; and

- the responsibilities and funding of the NWPPC be brought into line with the more limited role recommended for BPA.

An outgrowth of the Comprehensive Review was the Cost Review of the FCRPS (Cost Review). In September 1997, BPA and the NWPPC jointly launched a review of FCRPS costs. The objectives of the Cost Review were to ensure that BPA's long-term power and transmission costs would be as low as possible, consistent with sound business practices, enabling full cost recovery with power rates at or near market prices. The intent of the Cost Review was to:

1. give confidence to BPA customers, tribes, and constituents that future FCRPS costs would be managed effectively;

2. ensure that the Subscription process resulted in a very high level of customer load commitment;

3. minimize, if not avoid, transition (stranded) costs; and

4. ensure that obligations to the U.S. Treasury, third-party bondholders, and fish and wildlife recovery would remain at least as secure as they are currently.

The Cost Review drew on the expertise of five executives with experience in managing large organizations undergoing competitive transitions. The Cost Review recommendations explicitly excluded fish and wildlife recovery costs. They also recognized that several categories of costs were subject to change in the rates development process, including short-term power purchase, or residential exchange program costs, General Transfer Agreement (GTA), Federal interest, depreciation, and inter-businessline expenses. The panel addressed all other FCRPS costs to be recovered through BPA power and transmission rates, with a focus on power costs in the initial Subscription period, FY 2002 through 2006. A draft of the panel's recommendations was submitted to a month-long regional public comment process, which included two broadly attended public meetings. In addition, there were briefings of other groups throughout the region, including tribal, public power and environmental interests. The draft recommendations were modified to take into account comments received, and then submitted to the Administrator, the region’s Governors, the Northwest Congressional delegation, and the House and Senate Committees on Appropriations in March 1998.

The recommendations outlined in the Cost Review were developed on an exception basis, using a cost baseline that already included significant cost control initiatives. These cost control initiatives included:

- eliminating or renegotiating all power resource acquisitions;

- achieving substantial reductions in WNP-2 operating costs, and continuing operation of the project only if economic;

- reengineering the Power Business Line (PBL) processes for efficiency and accountability;

- holding the PBL O&M costs, including the other entities in the FCRPS, constant in nominal dollars over the nine-year planning horizon;

- substantially reducing PBL and corporate FTE levels, both Federal and contractor; reducing administrative and program costs in the Residential Exchange Program through settlement agreements;

- constraining losses due to renewable resource investments;

- reducing energy efficiency/conservation program costs, with a goal of achieving financial self-sufficiency by shifting from centrally procured incentives-based programs to approaches that are more market-driven; and by reducing Energy Efficiency staffing over the next four years;

- Pursuing direct funding for Future U.S. Army Corps of Engineers (COE) and Bureau of Reclamation (Reclamation) O&M expenses, as well as revenue-producing investments;

- constraining BPA-funded Federal investments to levels commensurate with availability of low-cost sources of capital;

- redesigning information technology and accounting/financial reporting system and services to be more responsive and less costly; and

- reducing the costs of the NWPPC.

These efforts had begun to yield substantial reductions in costs by the time of the Cost Review. The Cost Review Committee recommended that BPA undertake extraordinary efforts in its power, corporate, and transmission organizations to reduce the costs of its commercial operations and constrain the costs of its public benefit programs. Similarly, the Cost Review Committee recommended that other members of the FCRPS--COE, Reclamation, and Energy Northwest--act in concert with BPA by taking aggressive action to maximize the value of the FCRPS by reducing O&M costs and improving asset productivity. The specific recommendations were built on, or took exception to, the cost baseline:

1. Further reduce staffing and support costs of power marketing and other PBL functions not directly related to the operation of Federal power system through efficiency and reoriented long-term marketing efforts.

2. Fund regional conservation market transformation at a level proportional to the percent of regional firm load served by BPA, consistent with the recommendations of the Comprehensive Review.

3. Reduce projected legacy conservation contract expenses to reflect historical underspending.

4. Further reducing funding for the NWPPC to reflect changes in BPA's regional role, the NWPPC's role as recommended by the Comprehensive Review, and the continued importance of fish and wildlife issues.

5. Provide funding for costs of the three renewable resource projects that BPA currently was planning and for currently planned levels of renewable resource data collection and research and development.

6. Develop and implement a consolidated, integrated capital/asset management strategy for Federal hydro directed at maximizing value, including both financial returns and public benefits.

7. Implement a strategy for WNP-2 that combines aggressive cost management with a flexible response to market conditions and unforeseen costs.

8. Further reduce the cost of BPA's administrative and other internal support costs, including financial, human resources, information management, procurement, strategic planning, public affairs, legal services, and other internal service costs, to an aggregate 50 percent of 1996 actual levels.

9. Obtain legislative changes in the areas of personnel management and procurement to improve administrative flexibility and the ability to manage internal costs.

10. Further reduce the Transmission Business Line's internal O&M expenses through between the Power and Transmission Business Lines.

11. Conform to Federal Power Act requirements, adjusting and correcting functionalization of costs between the Power and Transmission Business Lines.

12. Further reduce Federal and non-Federal debt service expenses through refinancings, greater reliance on variable rate debt, and other debt reduction actions.

13. Account for previously identified "undistributed reductions."

For FCRPS activities as a whole, including power and transmission, the sum of these recommended cost reductions and efficiency gains was estimated at $136.9 million on average annually over the five-year period, FY 2002 through 2006. For the PBL the reductions and gains were estimated to be $145.7 million on average annually over the same five-year period. For additional information about these recommendations and the Cost Review, please see Appendix A.

In June 1998, BPA began a public involvement process entitled Issues '98. Issues '98 was designed to provide the region an overview and context for major policy issues surrounding BPA's future, including cost management. In addition to taking written comment, three public meetings where held within the region to provide an opportunity for the public to participate. BPA notified process participants that Issues '98 was their opportunity to comment on BPA's proposed implementation plan of the Cost Review recommendations. At the conclusion of the Issues '98 process, BPA completed and released the "Cost Review Implementation Plan." This document, published in October 1998, summarized the thirteen recommendations of the Cost

Review, the implementation plan, and relevant customer comments. This Study reflects the "Cost Review Implementation Plan," with key caveats. *See* Appendix A for a copy of the document and "Updates to Forecast of Generation Expenses." The caveats covered two cost areas that were subject to change outside the Cost Review.

As the first caveat, several cost components were noted as subject to change as BPA developed its rate proposal, namely, short-term power purchase expense, net costs of the Residential Exchange Program, GTA costs, Federal interest and depreciation, and inter-businessline expenses. Implementation of the Subscription Strategy, as explained in the Testimony of Burns *et al.*, WP-02-E-BPA-08, has resulted in substantially higher expense estimates for the power purchases necessary to balance power output and augment the system to meet forecasted firm power sales. The Subscription Strategy also includes a proposed settlement of the Residential Exchange Program that incorporates both a power and financial component. GTA and inter-businessline expenses estimates have also been updated for this initial rate proposal.

As the second caveat, the fish and wildlife funding amount shown in Issues '98 did not include operational costs (i.e., power purchases related to fish recovery) and did not reflect averages of the range of system configuration alternative costs for O&M and capital called for in the Principles.

Combined, the cost changes since Issues '98 have resulted in average annual expenses to $2,358 million, an increase of $489 million over the forecast for Issues '98. More detail the expense changes since Issues '98 can be found in Appendix A of this document and in the Testimony of DeWolf, *et al.*, WP-02-E-BPA-13.

2.2 Financial Risk Mitigation

BPA adopted a long-term policy in its 1993 Final Rate Proposal calling for setting rates that build and maintain financial reserves sufficient for the agency to achieve a 95 percent probability of meeting U.S. Treasury payments in full and on time for each two-year rate period. *See* 1993 Final Rate Proposal, Administrator's Record of Decision, WP-93-A-02 at page 72. In the 1996 rate case, this 95 percent, two-year standard was "converted" to an equivalent 88 percent probability of making all five U.S. Treasury payments in a five-year period.

$$(\sqrt{.95 = .975; * \ .975^{5}} = .88)$$

Since then, both the Comprehensive Review (discussed in Section 2.1) and the Principles have highlighted the need for a high Treasury payment probability. The Comprehensive Review recommendations were developed with three goals in mind. One of these goals was to "ensure repayment of the debt to the U.S. Treasury with a greater probability than currently exists . . ." The Principles specify that . . .

> "Bonneville will demonstrate a high probability of Treasury payment in full and on time over the five-year period.
>
> - A 100 percent probability of Treasury payment is not achievable, but BPA's new rates must be designed to maintain or improve Treasury payment probability, even in view of the range of fish costs.
>
> - BPA will demonstrate a probability of Treasury payment in full and on time over the five-year rate period at least equal to the 80 percent level established in the

last rate case and will seek to achieve an 88 percent level." *See* the Principles, Volume 1, Chapter 13 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

In this rate proposal, BPA has analyzed its power risks and is proposing risk mitigation tools designed to achieve the 88 percent probability standard for the generation function. To achieve this Treasury payment probability, the following risk mitigation "tools" are included in the ToolKit model:

1. Starting reserves: Starting financial reserves include cash in the BPA Fund and the deferred borrowing balance attributed to the generation function. The risk-adjusted values for starting reserves is projected to average $685.5 million at the beginning of FY 2002.

2. Credits under the Fish Cost Contingency Fund (FCCF): Under the Northwest Power Act, the Administrator makes expenditures from the BPA Fund to protect, Mitigate, and enhance fish and wildlife that are affected by Federal hydro. These costs are then allocated to the hydro projects and project purposes, including non-power purposes. So that ratepayers pay no more than the power share of fish and wildlife costs, the Northwest Power Act directs BPA to recoup its funding of non-power purposes via section 4(h)(10)(C) credits, which are implemented by reducing annual cash transfers to Treasury. Because they effectively serve as a source of cash, the credits are accounted for as a revenue and are included in the revenue forecast. *See* Chapter 5.2.3.3 of the Wholesale Power Rate Development Study, WP-02-E-BPA-05. The formula for calculating the credit is 27 percent of:

- BPA annual fish and wildlife program expenses and capital expenditures; and
- Power purchases and fish and wildlife recovery net of resale revenues.

The FCCF is comprised of section 4(h)(10)(C) credits that BPA has earned prior to 1994 but has yet to exercise. The current balance of the "fund" is $325 million. The terms of the agreement between BPA and the Administration for access to these credits were first described in an October 24, 1995, letter from the Office of Management and Budget Director, Alice Rivlin to Senator Mark Hatfield and formalized in an interagency Memorandum of Agreement (MOA) dated September 13, 1996. This MOA expires in FY 2001. *See* Volume 1, Chapter 13 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A. Under the MOA, BPA may use the FCCF to defray fish and other water-related costs if:

- higher costs are incurred than the MOA assumed because of court action;

- higher costs are incurred due to adverse water conditions (criteria designed to trigger access 25 to 30 percent of time); or

- a fisheries emergency is declared.

Administration commitments in the Principles confirm that current terms of access to the FCCF will be extended to the FY 2002-2006 rate period. (*Id.*). Use of the FCCF credits are accounted for as revenue. The revenue forecast includes a probabilistic estimate of the annual use of these credits. *See* Volume 1, Chapter 12 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A;

Chapter 5.2.3.3, Revenue Forecast in Wholesale Power Rate Development Study, WP-02-E-BPA-05; Testimony of Conger, *et al.*, WP-02-E-BPA-15.

3. Cost Recovery Adjustment Clause (CRAC): the CRAC adjusts posted wholesale power rates upward if actual accumulated net revenues attributable to the generation function fall below the thresholds shown in Table 3. The CRAC is applicable to Priority Firm Power [Preference (PF excluding Slice), Exchange Program, and Exchange Subscription], Industrial Firm Power (IP-02) including under the IPTAC and Cost-Based Index rate, Residential Load (RL-02) including the financial portion of any Residential Exchange Settlement under this rate schedule, and New Resources Firm Power (NR-02) rate schedules, as well as Subscription purchases under the FPS rate schedule. It is not applicable to pre-Subscription contracts or to Slice loads. The CRAC may trigger as frequently as each year of the five-year rate period. The adjustment would be applied to power deliveries beginning the April following the fiscal year in which the threshold was passed. Any such increase in FY 2002-2005 would remain in effect through March of the following year. During the final fiscal year of the rate period (2006) the rate would remain in effect through September 2006. The level of planned rate increase is limited to the lower of the annual Maximum Planned Recovery Amount in Table 3 below, or the amount by which accumulated net revenues under-run the threshold. *See* Volume 1, Chapter 12 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A; the rate schedule for CRAC; and Testimony of Lovell *et al.*, WP-02-E-BPA-14.

Table 3

CRAC Trigger Thresholds and Annual Caps

End of Fiscal Year	Reserves Equivalent to Threshold	Threshold (AANR*)	Maximum Planned Recovery Amount (beginning in following April)
2001	$300M	-$350M	$125M
2002	$300M	-$350M	$135M
2003	$500M	-$200M	$150M
2004	$500M	-$200M	$150M
2005	$500M	$-200M	$87.5M

* Accumulated net revenues attributable to generation function.

4. Planned Net Revenues for Risk (PNRR). PNRR is a component of the revenue requirement that is added to annual expenses. PNRR adds to cash flows so that financial reserves, in conjunction with other risk mitigation tools, achieves the TPP goal.

ToolKit Model

The ToolKit Model is used to determine the probability of making all planned Treasury payments during the five-year rate period given the risks identified in RISKMOD and Non-Operating Risk Model (NORM) (*see* Risk Analysis Study, WP-02-E-BPA-03), and the risk mitigation tools. ToolKit is part of a larger system of models that includes RISKMOD and the RISKMOD is the successor to the STREAM model that was used by BPA in previous rate cases. Like STREAM, RISKMOD is used to develop distributions of the generation function net revenues that reflect *operating* risks--hydro and thermal generation performance, California market prices, Southwest gas prices, and generating and non-generating public utility load uncertainty. As a counterpart to RISKMOD, NORM produces cost distributions that reflect the impact of *non-operating* risks that PBL is facing in the FY 2002-2006 rate period. These non-operating risks include, but are not limited to, fish and wildlife O&M and capital recovery expenses, and other expenses. Both RISKMOD and NORM are discussed in greater detail in the Risk Analysis Study, WP-02-E-BPA-03.

ToolKit is used to demonstrate BPA's ability to meet the 88 percent TPP standard, given the net revenue variability embodied in the distributions of operating and non-operating risks. More specifically, ToolKit is used to assess the effects of various policies and risk mitigation measures on the level of end of year reserves attributable to generation, with a deferral of Treasury payment occurring when these reserves fall below $50 million.

Thirteen (13) distinct, equally weighted, alternative fish operations are taken into account in the risk distributions used by the ToolKit model. Five of these 13 Fish and Wildlife Alternatives reflect a 90 percent-10 percent weighting of adjusted and unadjusted schedules of implementation, respectively. *See* Volume 1, Chapter 13 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A. The ToolKit evaluated 3900 separate five-year net revenue scenarios (300 per Fish and Wildlife Alternatives), assuming a starting reserves balance of $685.5 million. The model indicates that $127 million per year of planned net revenues for risk would be needed to achieve the desired 88 percent TPP standard, resulting in an expected value of $1.258 billion for FY 2006 ending reserves. Both section 4(h)(10)(C) and FCCF credits were modeled in RISKMOD for the FY 2002 – 2006 rate period, while ToolKit was used to assess the effects of the section 4(h)(10)(C) credits for the remainder of the current rate period. *See* Volume 1, Chapter 12 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A for further discussion of the ToolKit Model and the FCCF.

BPA is also proposing criteria for distributing “dividends” to certain stakeholders if actual accumulated net revenues reach the Dividend Distribution Clause (DDC) Threshold of $500 million, and if a five-year forecast shows that BPA’s TPP standard of 88 percent (or equivalent replacement financial criterion) would still be met. BPA intends to conduct a public process by October 1, 2001 to September 2001 to determine how any distribution will be allocated among stakeholders during the rate period. The first $15 million will be allocated to qualifying Conservation and Renewable purposes. The remaining dividend amount, if any, will be allocated to other stakeholders, one of which will be power customers. The distribution of any amounts to power customers would be made through credits to their power bills. *See* DeWolf, *et al.*, WP-02-E-BPA-13.

2.3 Capital Funding

FCRPS capital investments include COE, Reclamation, and BPA capital investments and third-party resource investments for which debt is secured by BPA (capitalized contracts). Current FCRPS capital outlay projections are $1,322 million for the FY 2002-2006 rate period and $2,447 million for the FY 1999 - 2006 cost evaluation period. These investments include:

- efficiency and reliability improvements and replacements in hydro generation;

- investment in fish and wildlife recovery funded by BPA and by appropriations and implemented by various groups in the Northwest including the COE and Reclamation. Fish and wildlife investment includes tributary passage, habitat construction, supplementation construction, gas abatement, and mainstem passage; and

- investment in ADP and other capital equipment.

Sources of Capital, FY 2002-2006

($ in millions)

Investments in fish and wildlife recovery	
Bonds Issued to U.S. Treasury	177
Federal Appropriations [1]	587
	764
Investments in revenue producing assets	
Bonds Issued to U.S. Treasury	390
Federal Appropriations [1]	144
Non-Federal Debt	24
	558
Total	1,322

[1] Reflects projected plant-in-service, not Congressional appropriations for the period.

This Study does not project that any capital investments will be funded from current revenues.

Bonds Issued to the Treasury

This source of capital will be used to finance FY 2002 - 2006 BPA capital program investments and COE and Reclamation investments that BPA has agreed to direct-fund under P.L. No. 102-486. These expenditures include a projected $567 million in BPA Fish and Wildlife “direct” Program investments ($177 million), and generating resource investments of the COE and Reclamation ($390 million) during fiscal years 2002 – 2006.

Interest rates on bonds issued by BPA to the U.S. Treasury are set at market interest rates comparable to securities issued by other agencies of the U.S. Government. Interest rates on bonds projected to be issued are included in Volume 1, Chapter 6 of the Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Federal Appropriations

This Study reflects that all COE and Reclamation capital investments of the FCRPS will be financed by Federal appropriations unless they are direct-funded by BPA. Such investments are projected to total $731 million during the rate period, including $587 million in COE investments for fish and wildlife recovery and the $144 million for generating resource additions and replacements. Capital investments funded by this source do not become a repayment obligation when the investment is placed in service.

"The Bonneville Appropriations Refinancing Act" (the Refinancing Act) was enacted in April 1996. This Refinancing Act reset the unpaid principal of FCRPS appropriations and reassigned interest rates. New principal amounts were established at the beginning of FY 1997, at the present value of the principal and annual interest payments BPA would make to the Treasury for these obligations in the absence of the Refinancing Act, plus $100 million. The Refinancing Act restricted prepayment of the new principal to $100 million in the FY 1997-2001 period. Other repayment terms and conditions were unaffected. The Refinancing Act also specifies that BPA's annual payments to the Confederated Tribes of the Colville Reservation be treated as a credit against its annual payment to Treasury. The legislation included a provision directing BPA to offer a contractual commitment to its customers that the appropriations repayment obligations will not be increased in the future.

The interest rate forecast for appropriated capital investments expected to be placed in service is found in Volume 1, Chapter 7 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A. Practices for assigning interest rates to new appropriations investment and for determining interest during construction were changed by the Refinancing Act. Each new capital investment is assigned a rate from the Treasury yield curve prevailing in the month prior to the beginning of the fiscal year in which the new investment is placed in service. In determining interest during construction for new capital investments, for each fiscal year of construction the prevailing Treasury one-year rate is applied to the sum of: (1) the cumulative expenditures made; and (2) interest during construction that has accrued prior to the end of the subject fiscal year. *See* Chapter 5 of this Study and Volume 1, Chapter 9 of Documentation for Revenue Requirement Study, W-96-FS-BPA-02A.

Third-Party Debt

Third-party debt differs from Treasury debt in that entities other than BPA or Treasury issue the debt. BPA's promise to make payments serves as security for bonds or other debt that the third-party issues, resulting in wider market access and potentially more favorable interest rates for the seller. Examples of acquisitions financed in this way include Energy Northwest's WNP-1, –2, and –3 nuclear power projects, and the Lewis County Public Utility District Hydroelectric (Cowlitz Falls). This Study includes $10 million in projected WNP-2 additions and replacements to be financed by Energy Northwest during the cost evaluation period.

FEDERAL COLUMBIA RIVER POWER SYSTEM (FCRPS)
PROJECTED CAPITAL FUNDING REQUIREMENTS FOR THE POWER BUSINESS LINE
1999 RATE PROPOSAL
(Annual Outlays in Millions of Dollars)

	Actual Average FYs 90-97	Current Rate Period: Actual FY 97	Actual FY98	FY 99	FY 2000	FY 2001	Average FY 97-'01	Next Rate Period: FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Average FYs '02-'06
POWER													
Capital Requirements for Revenue Producing Investments													
Corps & Bureau Additions/Replacements - Direct Funded	11.1	19.6	28.0	54.6	80.9	76.1	51.8	89.9	86.7	61.7	62.1	62.1	72.5
Corps & Bureau Additions/Replacements - Appropriations	45.3	59.7	0.0	22.3	20.7	35.6	27.7	23.9	36.4	21.3	31.3	31.3	28.8
PBL Capital Equipment	N/A	0.0	2.6	3.0	3.0	3.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0
Capitalized Bond Premium	0.0	0.0	2.8	2.8	8.4	3.0	3.4	5.2	3.0	3.0	3.0	3.0	3.4
WNP-2: Additions/Replacements	42.5	11.0	12.2	6.7	5.3	5.7	8.2	5.7	4.4	4.6	4.7	4.7	4.8
Other Non - Federal	1.5	0.0	36.4 [2]	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual Capital Requirements for Revenue Producing Inv	**100.4**	**90.3**	**82.0**	**89.4**	**118.3**	**123.4**	**100.7**	**126.7**	**132.5**	**92.6**	**103.1**	**103.1**	**111.6**
Cumulative Capital Requirements for Rev Producing Investments		**90.3**	**172.3**	**261.7**	**380.0**	**503.4**		**126.7**	**259.1**	**351.7**	**454.8**	**557.9**	
Capital Requirements for Non-Revenue Producing and Public Benefit Investments													
Energy Conservation	63.1	20.5	14.3	14.0	1.0	1.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0
Fish Investment													
BPA Fish and Wildlife Investment [3]	21.2	28.1	22.0	27.0	27.0	27.0	26.2	34.7	38.3	35.8	34.0	34.2	35.4
Corps & Bureau Fish Investment - Appropriations [3]	23.7	(32.9) [4]	0	106.5	18.9	339.8	86.4	111.8	44.7	213.6	91.2	125.9	117.4
Total Fish Investment	44.9	(4.8)	22	133.5	45.9	366.8	112.7	146.5	83.0	249.4	125.2	160.1	152.8
Other Third Party	47.7 [5]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Capital Req. for Non-Rev. & Public Benefit Invest	**155.7**	**15.7**	**36.3**	**147.5**	**46.9**	**367.8**	**122.8**	**146.5**	**83.0**	**249.4**	**125.2**	**160.1**	**152.8**
Cumulative Capital Req. for Non-Rev. & Public Benefit Invest		**15.7**	**52.0**	**199.5**	**246.3**	**614.1**		**146.5**	**229.5**	**478.9**	**604.1**	**764.2**	
ANNUAL FUNDING REQUIREMENTS FOR POWER	**256.1**	**106.0**	**118.3**	**236.8**	**165.2**	**491.2**	**223.5**	**273.2**	**215.5**	**342.0**	**228.3**	**263.2**	**264.4**
CUMULATIVE FUNDING REQUIREMENTS FOR POWER		**106.0**	**224.3**	**461.1**	**626.3**	**######**		**273.2**	**488.6**	**830.6**	**######**	**######**	

FOOTNOTES:

Reflects plant in service, including IDC, not expenditures.

1996 Final Rate Proposal projected that borrowing for CARES Wind would take place in FY 1996. Current projections are that borrowing will occur in FY 1999.

Reflects annual average of the plant-in-service in all 13 scenarios.

Reflects transfer from PIS to CWIP of $42.9 million related to Mitigation Analysis.

Includes Northern Wasco, CARES Conservation, Cowlitz Falls, and Tacoma Conservation

3. DEVELOPMENT OF REPAYMENT STUDIES

Repayment studies are performed as the first step in determining revenue requirements. The studies establish the schedule of annual U.S. Treasury amortization for the rate test period and the resulting interest payments.

The horizon of each repayment study is 50 years after each rate test year. The Revenue Requirement Study includes the results of generation repayment studies for each of the five years in the rate test period, FY 2002 – 2006. In conducting the repayment studies, BPA includes debt service payments associated with its capitalized contract obligations; fixed payments associated with long-term energy resource acquisition contracts; and outstanding and projected generation repayment obligations on appropriations and on bonds issued to Treasury.

Funding for replacements projected during the repayment period are also included in the repayment study, consistent with the requirements of RA 6120.2. COE and Reclamation replacements funded by appropriations and placed in service in 1994 or later have repayment periods that are set at the weighted average service life of all replacements going into service at that project in that year. Appropriations are scheduled to be repaid within the expected useful life of the associated facility, or 50 years, whichever is less.

Bonds issued by BPA to the Treasury may include 3 to 45-year terms, taking into account the estimated average service lives for investments and prudent financing and cash management factors. Most bonds are issued with a provision that allows the bond to be called after a certain time, typically five years. Bonds may also be issued with no early call provision. Early retirement of eligible bonds requires that BPA pay a bond premium to the Treasury.

Bonds are issued to finance BPA conservation, fish and wildlife programs, and COE and Reclamation investments direct-funded by BPA, and repaid within the provisions of each bond agreement with the Treasury. Bonds to finance fish and wildlife capital investments are issued with maturities not to exceed 15 years, the same period over which BPA amortizes these capital investments. Conservation bonds are issued with maturities not to exceed 20 years, consistent with the period over which BPA amortizes these capital investments. COE and Reclamation direct-funding bonds are issued with maturities not to exceed 45 years.

Based on these parameters, the repayment study establishes a schedule of planned amortization payments and resulting interest expense by determining the lowest levelized debt service stream necessary to repay all generation obligations within the required repayment period.

Further discussion of the repayment program and repayment program tables is included in this Study at Appendix B; and in Volume 2, Chapter 11 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02B. *See* Chapter 5 of this Study, for an explanation of repayment policies and requirements.

4. FY 1999 GENERATION REVENUE REQUIREMENTS

This chapter explains the cost accounting formats used to develop revenue requirements for FY 2002 – 2006. Section 4.1.1 provides a line-by-line description of the Revenue Requirement Income Statement and Section 4.1.2 provides a line-by-line description of the Revenue Requirement Statement of Cash Flows.

4.1 Revenue Requirement Format

For each year of a rate test period, BPA prepares two tables that reflect the process by which revenue requirements are determined. The Income Statement includes projections of Total Expenses, Planned Net Revenues for Risk, and if necessary, a Minimum Required Net Revenues component. The Statement of Cash Flows shows the analysis used to determine Minimum Required Net Revenues and the cash available to risk mitigation.

The Income Statement (Table 5A) displays the components of the annual revenue requirements, which include Total Operating Expenses (Line 16), Net Interest Expense (Line 24), Minimum Required Net Revenues (Line 26), and Planned Net Revenues for Risk (Line 27). The sum of these four major components is the Total Revenue Requirement (Line 29).

The amounts shown in Total Operating Expenses and Net Interest Expense are primarily established outside the rate setting process. The Minimum Required Net Revenues (Line 26) result from an analysis of the Statement of Cash Flow (Table 5B). Minimum Required Net Revenues may be necessary to ensure that revenue requirements are sufficient to cover all cash requirements, including annual amortization of the Federal investment as determined in the power repayment studies and any other cash requirements such as payment of irrigation assistance.

The Statement of Cash Flow analyzes annual cash inflows and outflows. Cash provided by Current Operations (Line 7), driven by the Non-Cash Expenses shown in Lines 4, 5, and 6 must be sufficient to compensate for the difference between Cash Used for Capital Investments (Line 13) and Cash from Treasury Borrowing and Appropriations (Line 20). If cash provided by Current Operations are not sufficient, Minimum Required Net Revenues must be included in revenue requirements to accommodate the shortfall, yielding at least at zero annual Increase in Cash (Line 21). The Minimum Required Net Revenues shown on the Statement of Cash Flows (Line 2) is then incorporated in the Income Statement (Line 26).

4.1.1 Income Statement. Below is a line-by-line description of the components in the Income Statement (Table 5A). Volume 1 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02B provides additional information on the development and use of the data contained in the tables.

O&M (Line 2). O&M represents FCRPS system O&M expenses incurred by the COE, Reclamation, U.S. Fish and Wildlife Service (USFWS) , and BPA. Specific BPA O&M expenses include generation oversight, power scheduling, (including upstream benefits), power marketing, Civil Service Retirement System pension expense, inter-business line expenses, administrative and support services, GTAs, and the costs of the NWPPC. This line also includes payments to the Confederated Tribes of the Colville Reservation as called for under the Colville Settlement Act.

Short-Term Power Purchases (Line 4). Short-term purchases of power and off-system storage services are made to provide operational flexibility, displace higher cost purchases, and augment the system output to serve Subscription loads. System augmentation purchases are made to achieve load/resource on an annual basis. Balancing power purchases are made to achieve load/resource balance on an hourly, daily, and monthly basis. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A; and Wholesale Power Rate Development Study, WP-02-E-BPA-05.

Long-Term Power Purchases (Line 5). Long-term power purchases are acquisitions of cost-effective resources intended to meet BPA's load obligations. These long-term commitments include the Idaho Falls and Cowlitz Falls hydroelectric projects, the billing credits and competitive acquisitions programs, and renewable resources such as wind and geothermal resource development. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Trojan (Line 6). Through net-billing arrangements, BPA has acquired Eugene Water and Electric Board's (EWEB) 30 percent ownership share of the now-terminated Trojan Nuclear Project. BPA's cost includes EWEB's share of Trojan phase-down, decommissioning costs, EWEB's debt service, and other Trojan-related costs. EWEB's other Trojan-related costs include contributions in lieu of taxes and EWEB's direct costs. *See* Volume 1, Chapters 4 and 10 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

WNP-1, -2, and –3 (Lines 7, 8 and 9). Through project and net-billing agreements with Energy Northwest and BPA preference customer participants, and through exchange agreements with IOUs, BPA has acquired 100 percent of the capability of WNP-1 and -2 and 70 percent of the capability of WNP-3. Under a settlement agreement, BPA has certain rights to and obligations for the IOUs' 30 percent share of WNP-3.

BPA is obligated to fund all cash requirements associated with its share of these projects. These cash requirements include debt service and legal costs for WNP-1; debt service, operating, decommissioning, and capital costs for WNP-2; and debt service, 70 percent of preservation, and IOU settlement costs for WNP-3. IOU settlement costs for WNP-3 include the remaining 30 percent of preservation costs for that project.

Debt service costs include interest on outstanding Energy Northwest bonds, retirement of bonds according to schedules in each bond issue, and a reserve and contingency amount equal to 10 percent of the annual interest and retirement of bonds, less investment income on various accounts (Bond Fund Reserve Account, Bond Fund Interest Account, Reserve and Contingency Fund, Bond Fund Principal Account, and Revenue Fund), and transfer of any prior year's surplus reserve and contingency. *See* Volume 1, Chapters 4 and 10 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Residential Exchange Program (Line 10). Under the Residential Exchange Program, as provided in Section 5(c) of the Northwest Power Act, 16 U.S.C. § 839c(c), BPA purchases power from a participating utility at the utility's Average System Cost (ASC). BPA then sells an equivalent amount of power to the utility at BPA's applicable Priority Firm rate. The Residential Exchange Program provides regional utilities' residential and small farm customers with benefits of the Federal power system. The exchange of power is not a conventional power transaction. No power is actually transferred to or from BPA under the Program; rather, participating utilities receive benefit payments from BPA that represent the difference between "selling high" to BPA and "buying low" from BPA. BPA's rate development methodology has been based on the gross costs of the program. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

BPA Fish and Wildlife O&M (Line 11). BPA funds projects designed to accomplish measures in the NWPPC's Columbia River Basin Fish and Wildlife Program and the 1995 National Marine Fisheries Service (NMFS) Biological Opinion, and to be consistent with the fish cost stabilization agreement. This line item includes the expense portion of BPA's Fish and Wildlife "direct" Program, including staff costs and operating expenses of fish and wildlife activities. These activities include measures to implement the NWPPC's Fish and Wildlife Program and Biological Opinions issued by the NMFS and the USFWS. The amounts are consistent with the Principles. *See* Volume 1, Chapters 4 and 13 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Amortization of Fish and Wildlife Investment (Line 12). Amortization of Fish and Wildlife is the annual expense associated with the write-off of BPA capital investments in BPA's Fish and Wildlife Program. The annual write-off is calculated using the straight-line method of depreciation over an expected average life of 15 years. *See* Volume 1, Chapters 4 and 5 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Conservation (Line 13). The Northwest Power Act requires BPA to treat cost-effective conservation as an electric power resource in planning to meet the Administrator's obligations to serve loads. The competitive market situation is driving the need for alternatives to traditional approaches to developing conservation resources. BPA is transitioning from centralized BPA-funded programs to new customer-driven approaches. The costs shown here reflect BPA's participation with other regional entities supporting marketing transformation and development activities, as well as facilitating activities which meet the needs of customers and create business opportunities for the private sector. *See* Volume 1, Chapters 4 and 10 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Amortization of Conservation Investment (Line 14). Amortization of Conservation is the annual expense associated with the write-off of BPA's investments in energy conservation measures. The annual conservation write-off is calculated using the straight-line method of depreciation over an expected life of 20 years. *See* Volume 1, Chapters 4 and 5 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Federal Projects Depreciation (Line 15). Depreciation is the annual capital recovery expense associated with FCRPS plant-in-service. Reclamation and COE (including lower Snake River Fish and Wildlife Compensation Plan) plant, including assets for fish and wildlife recovery, is depreciated by the straight-line method of calculation, using the average service life of each project. Capital equipment (office furniture and fixtures and data processing hardware and software) is also depreciated by the straight-line method using the average service life for the categories of capital investment. *See* Volume 1, Chapters 4 and 5 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Total Operating Expenses (Line 16). Total Operating Expenses is the sum of the above expenses (Lines 2 through 15).

Interest on Appropriated Funds (Line 19). Interest on Appropriated Funds includes interest on BPA, COE, and Reclamation appropriations as determined in the generation repayment studies. *See* Volume 1, Chapters 4, 6, and 9 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Interest on Long-Term Debt (Line 20). Interest on long-term debt includes interest on bonds that BPA issues to the U.S. Treasury to fund investments in capital equipment, conservation, fish and wildlife, and to fund Reclamation and COE investments under the Energy Policy Act of 1992 (EPA-92) (P.L. No. 102-486, 1992 U.S. Code Cong. & Admin. News, 106 State. 2776). Such interest expense is determined in the generation repayment studies. Any payments of premiums for bonds projected to be amortized are included in this line. Also included is an interest income credit calculated in the generation repayment studies on funds to be collected during each year for payments of Federal interest and amortization at the end of the fiscal year. A further explanation of the calculation of the interest credit computed within the generation repayment studies is included in Appendix C. *See* Volume 1, Chapters 4, 6, and 9 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Interest Credit on Cash Reserves (Line 21). An interest income credit is also computed on the projected year-end cash balance in the BPA fund attributable to the Power Marketing function that carry over into the next year. It is credited against bond interest. *See* Volume 1, Chapter 6 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Capitalization Adjustment (Line 22). Implementation of the Refinancing Act entailed a change in capitalization on BPA's financial statements. Outstanding appropriations were reduced as a result of the refinancing by $2,142 million in the generation function. The reduction is recognized annually over the remaining repayment period of the refinanced appropriations. The annual recognition of this adjustment is based on the increase in annual interest expense resulting from implementation of the Refinancing Act, as shown in repayment studies for the year of the refinancing transaction (1997). The capitalization adjustment is included on the income statement as a non-cash, contra-expense. *See* Volume 1, Chapter 8 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Allowance for Funds Used During Construction (AFUDC) (Line 23). AFUDC is a credit against interest costs on long-term debt (Line 20). This reduction to interest costs reflects an estimate of interest on the funds used during the construction period of facilities that have yet to be placed in service. AFUDC is capitalized along with other construction costs and is recovered through rates over the expected service life of the related plant as part of the depreciation expense after the facilities are placed in service. AFUDC, which is calculated outside the generation repayment studies, is associated with the COE and Reclamation capital investments direct-funded by BPA. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Net Interest Expense (Line 24). Net Interest Expense is computed as the sum of Interest on Appropriated Funds (Line 19), Interest on Long-Term (Line 20), Interest Credit on Cash Reserves (Line 21), capitalization adjustment (Line 22), and AFUDC (Line 23).

Total Expense (Line 25). Total Expenses are the sum of Total Operating Expenses (Line 16) and Net Interest Expense (Line 24).

Minimum Required Net Revenues (Line 26). Minimum Required Net Revenues, an input from Line 2 of the Statement of Cash Flows (Table 5B), may be necessary to cover cash requirements in excess of accrued expenses. An explanation of the method used for determining the Minimum Required Net Revenues is included in Section A2.

Planned Net Revenues for Risk (Line 27). Planned Net Revenues for Risk are the amount of net revenues to be included in rates for financial risk mitigation. Planned net revenues for risk of $127 million per year (in addition to starting reserves, the cash flow when non-cash expenses exceed cash payments, the CRAC and other risk mitigation tools) are available to mitigate risk in FY 2002-2006.

Total Planned Net Revenues (Line 28). Total Planned Net Revenues is the sum of Minimum Required Net Revenues (Line 26) and Planned Net Revenues for Risk (Line 27).

Total Revenue Requirement (Line 29). Total Revenue Requirement is the sum of Total Expenses (Line 25) and Total Planned Net Revenues (Line 28).

4.1.2 Statement of Cash Flows. Below is a line-by-line description of each of the components in the Statement of Cash Flows (Table 5B). Volumes 1 and 2 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A and WP-02-E-BPA-02B, provide additional information related to the use and development of the data contained in table.

Minimum Required Net Revenues (Line 2). Determination of this line is a result of annual cash inflows and outflows shown on the Statement of Cash Flows. Minimum Required Net Revenues may be necessary so that the cash provided from operations will be sufficient to cover the planned amortization and irrigation assistance payments (the difference between Lines 13 and 20) without causing the Annual Increase (Decrease) in Cash (Line 21) to be negative. The Minimum Required Net Revenues amount determined in the Statement of Cash Flows is incorporated in the Income Statement (Line 26).

Federal Projects Depreciation (Line 4). Depreciation is from the Income Statement (Table 5A, Line 15). It is included in computing Cash Provided By Operations (Line 8) because it is a non-cash expense of the FCRPS.

Amortization of Conservation/Fish and Wildlife Investment (Line 5). Amortization of Conservation and Fish and Wildlife Investment is from the Income Statement (Table 5A, Lines 12 and 14). Similar to Depreciation (Line 4), it is a non-cash expense.

Capitalization Adjustment (Line 6). Capitalization Adjustment is from the Income Statement (Table 5A, Line 22). It is a non-cash (contra) expense. *See* Volume 1, Chapter 8 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Cash Provided By Current Operations (Line 7). Cash Provided By Current Operations, the sum of Lines 2, 4, 5, and 6 is available for the year to satisfy cash requirements.

Investment in Utility Plant (Line 10). Investment in Utility Plant represents the annual increase in additions to plant-in-service for COE, Reclamation, and BPA including construction work-in-progress funded by bonds. *See* Volume 1, Chapter 5 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Investment in Conservation (Line 11). Investment in Conservation represents the annual increase in capital expenditures associated with Conservation programs. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Investment in Fish and Wildlife (Line 12). Investment in Fish and Wildlife represents the annual increase in BPA's capital expenditures to fund projects designed to comply with the NWPPC's Columbia River Basin Fish and Wildlife Program and Biological Opinions issued by NMFS and USFWS. These amounts are consistent with the Principles. *See* Volume 1, Chapters 5 and 13 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Cash Used for Capital Investments (Line 13). Cash Used for Capital Investments is the sum of Lines 10, 11, and 12.

Increase in Long-Term Debt (Line 15). Increase in Long-Term Debt reflects the new bonds issued by BPA to the U.S. Treasury to fund capital equipment, conservation, and fish and wildlife capital programs and to direct-fund Reclamation and COE investments under the EPA-92. Also included in this amount are any notes issued to the U.S. Treasury. *See* Volume 1, Chapter 7 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Repayment of Long-Term Debt (Line 16). Repayment of Long-Term Debt is BPA's planned repayment of outstanding bonds issued by BPA to the U.S. Treasury as determined in the generation repayment studies. *See* Volume 1 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Increase in Congressional Capital Appropriations (Line 17). Increase in Congressional Capital Appropriations represents Congressional appropriations projected to be received during the year for COE and Reclamation capital projects. *See* Volume 1, Chapter 5 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Repayment of Capital Appropriations (Line 18). Repayment of Capital Appropriations represents projected amortization of outstanding COE and Reclamation appropriations as determined in the generation repayment studies. *See* Volume 2 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02B.

Payment of Irrigation Assistance (Line 19). Payment of Irrigation Assistance represents the payment of appropriated capital construction costs of Reclamation irrigation facilities that have been determined to be beyond the ability of the irrigators to pay and allocated to generation revenues for repayment. *See* Volume 1, Chapter 10 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A.

Cash From Treasury Borrowing and Appropriations (Line 20). Cash from Treasury Borrowing and Appropriations is the sum of Lines 15 through 19. This is the net cash flow resulting from increases in cash from new long-term debt and capital appropriations and decreases in cash from repayment of long-term debt and capital appropriations.

Annual Increase (Decrease) in Cash (Line 21). Annual Increase (Decrease) in Cash is the sum of Lines 7, 13, and 20 and reflects the annual net cash flow from current operations and investing and financing activities. Revenue requirements are set to meet all projected annual cash flow requirements, as included on the Statement of Cash Flows. A decrease shown in this line would indicate that annual revenues would be insufficient to cover the year's cash requirements. In such cases, Minimum Required Net Revenues are included to offset such decrease. *See* discussion above of Minimum Required Net Revenues (Line 2).

Planned Net Revenues for Risk (Line 22). Planned Net Revenues for Risk reflects the amounts included in revenue requirements to meet BPA's risk mitigation objectives (from Table 5A, Line 27).

Total Annual Increase (Decrease) in Cash (Line 23). Total Annual Increase (Decrease) in Cash in the sum of Lines 21 and 22. It is the total annual cash that is projected to be available to add to BPA's cash reserves.

4.2 Current Revenue Test

Consistent with RA 6120.2, the continuing adequacy of existing rates must be tested annually. The current revenue test (s*ee* Tables 6 and 7) determines whether the revenues expected from current rates can continue to meet cost recovery requirements and, therefore, be extended. However, due to the significant restructuring of BPA's wholesale power products and services under Subscription and the resulting changes in contracts, as well as BPA's need to implement the Principles, it is not relevant whether current rates could superficially satisfy cost recovery requirements.

4.3 Revised Revenue Test

Consistent with RA 6120.2, the adequacy of proposed rates must be demonstrated. The revised revenue test determines whether the revenues projected from proposed rates will meet cost recovery requirements as well as the U.S. Treasury payment probability risk goal for the rate approval period. The revised revenue test was conducted using the base case forecast of revenues under proposed rates. The results of the revised revenue test demonstrate that proposed rates are adequate to fulfill the basic cost recovery requirements and meet risk mitigation policy for the rate approval period of FY 2002 through 2006.

For the rate test period, the demonstration of the adequacy of proposed rates is shown on Tables 8A (Income Statement) and 8B (Cash Flow Statement).

Table 8B, Statements of Cash Flows, tests the sufficiency of the resulting Net Revenues from Table 8A (Line 27) for making the planned annual amortization and irrigation assistance payments and achieving the Administrator's financial objectives. This is demonstrated by the Annual Increase (Decrease) in Cash (Line 21). As explained in Section B.2, the annual cash flow (Line 21) must be at least zero to demonstrate the adequacy of the projected revenues to cover all cash requirements.

Under Subscription, the Residential Exchange Program has been replaced by a power sale to and a financial settlement with the participating utilities. *See* Leathly, *et al.*, WP-02-E-BPA-19.

For the initial proposal, BPA has incorporated a cost adjustment specifically to meet the rate pledge to customers. This calculated reduction to revenue requirements, determined in rate development as the amount necessary for resulting rates to satisfy the pledge, is meant to be a placeholder. It is not BPA's plan to achieve the revenue requirement reduction through additional cost cutting measures. The same results may be achieved by the final rate proposal from changes in the risk profile (i.e., higher reserves at the beginning of the rate period), modifications to the risk mitigation modeling, and/or other valid assumptions affecting rate development that may emerge in the course of the formal proceeding.

4.4 Repayment Test at Proposed Rates

Table 9 demonstrates whether projected revenues from proposed rates are adequate to meet the cost recovery criteria of RA 6120.2 over the repayment period. The data are presented in a format consistent with the revised revenue tests (Tables 8A and 8B) and separate accounting analyses. The focal point of these tables is the Net Position (Column K), which is the amount of funds provided by revenues that remain after meeting annual expenses requiring cash for the rate period and repayment of the Federal investment. Thus, if the Net Position is zero or greater in each of the year of the rate approval period through the repayment period, the projected revenues demonstrate BPA's ability to repay the Federal investment in the FCRPS within the allowable time. As shown in Column K, the resulting Net Position is greater than zero for each year of the rate approval period and in each year of the repayment period.

The historical data on this table have been taken from BPA's separate accounting analysis. The rate test period data have been developed specifically for this rate filing. The repayment period data are presented consistent with the requirements of RA 6120.2.

TABLE 5A
GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
($thousands)

		A FY 2002	B FY 2003	C FY 2004	D FY 2005	E FY 2006
1	OPERATING EXPENSES:					
2	OPERATION & MAINTENANCE	488,876	479,306	482,017	475,181	474,314
3	PURCHASE AND EXCHANGE POWER-					
4	SHORT-TERM POWER PURCHASES	152,910	149,027	157,723	166,542	173,637
5	LONG-TERM POWER PURCHASES	65,904	66,159	66,450	66,977	67,414
6	TROJAN	19,547	14,154	12,564	12,589	12,609
7	WNP NO. 1	178,104	168,240	175,007	168,294	180,376
8	WNP NO. 2	351,536	408,804	404,348	361,649	391,800
9	WNP NO. 3	156,806	156,162	152,401	152,649	151,006
10	RESIDENTIAL EXCHANGE PROGRAM	0	0	0	0	0
11	BPA FISH & WILDLIFE O&M	131,700	138,000	140,100	142,900	144,400
12	AMORTIZATION OF BPA FISH & WILDLIFE INVESTMENT	20,589	22,659	24,554	26,211	27,224
13	CONSERVATION	34,929	33,340	33,640	34,040	34,340
14	AMORTIZATION OF BPA CONSERVATION INVESTMENT	59,413	55,662	47,201	43,255	37,726
15	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
16	TOTAL OPERATING EXPENSES	1,755,600	1,789,422	1,796,175	1,752,502	1,799,009
17	INTEREST EXPENSE:					
18	INTEREST ON FEDERAL INVESTMENT-					
19	ON APPROPRIATED FUNDS	251,553	255,161	259,862	266,685	266,724
20	ON LONG-TERM DEBT	64,601	68,691	76,747	78,548	81,734
21	INTEREST CREDIT ON CASH RESERVES	(50,759)	(59,927)	(67,491)	(73,837)	(79,971)
22	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
23	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(2,992)	(2,890)	(2,050)	(2,056)	(2,044)
24	NET INTEREST EXPENSE	214,665	213,507	219,193	224,550	221,653
25	TOTAL EXPENSES	1,970,265	2,002,929	2,015,368	1,977,052	2,020,662
26	MINIMUM REQUIRED NET REVENUES [1]	0	0	0	21,428	1,918
27	PLANNED NET REVENUES FOR RISK	127,000	127,000	127,000	127,000	127,000
28	TOTAL PLANNED NET REVENUES (26+27)	127,000	127,000	127,000	148,428	128,918
29	**TOTAL REVENUE REQUIREMENT**	**2,097,265**	**2,129,929**	**2,142,368**	**2,125,480**	**2,149,580**

[1] SEE NOTE ON CASH FLOW TABLE.

TABLE 5B
GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
($thousands)

		A FY 2002	B FY 2003	C FY 2004	D FY 2005	E FY 2006
1	CASH FROM CURRENT OPERATIONS:					
2	MINIMUM REQUIRED NET REVENUES [1]	0	0	0	21,428	1,918
3	EXPENSES NOT REQUIRING CASH:					
4	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
5	AMORTIZATION OF CONSERVATION/F&W INVESTMENT	80,002	78,321	71,755	69,466	64,950
6	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
7	CASH PROVIDED BY CURRENT OPERATIONS	127,552	128,703	124,050	148,319	126,242
8	CASH USED FOR CAPITAL INVESTMENTS:					
9	INVESTMENT IN:					
10	UTILITY PLANT	(228,000)	(168,700)	(297,500)	(185,525)	(220,225)
11	CONSERVATION	0	0	0	0	0
12	FISH & WILDLIFE	(34,732)	(38,317)	(35,825)	(33,988)	(34,182)
13	CASH USED FOR CAPITAL INVESTMENTS	(262,732)	(207,017)	(333,325)	(219,513)	(254,407)
14	CASH FROM TREASURY BORROWING AND APPROPRIATIONS:					
15	INCREASE IN LONG-TERM DEBT	127,032	125,917	98,425	97,013	97,207
16	REPAYMENT OF LONG-TERM DEBT	(66,000)	(5,622)	(34,582)	(28,781)	(1)
17	INCREASE IN CONGRESSIONAL CAPITAL APPROPRIATIONS	135,700	81,100	234,900	122,500	157,200
18	REPAYMENT OF CAPITAL APPROPRIATIONS	(41,208)	(66,860)	(56,464)	(119,538)	(126,241)
19	PAYMENT OF IRRIGATION ASSISTANCE	0	0	(739)	0	0
20	CASH FROM TREASURY BORROWING AND APPROPRIATIONS	155,524	134,535	241,540	71,194	128,165
21	ANNUAL INCREASE (DECREASE) IN CASH	20,344	56,221	32,265	0	0
22	PLANNED NET REVENUES FOR RISK	127,000	127,000	127,000	127,000	127,000
23	TOTAL ANNUAL INCREASE (DECREASE) IN CASH	147,344	183,221	159,265	127,000	127,000

[1] Line 21 must be greater than or equal to zero, otherwise net revenues will be added so that there are no negative cash flows for the year.

TABLE 6A
GENERATION CURRENT REVENUE TEST
INCOME STATEMENT
($thousands)

		A FY 2002	B FY 2003	C FY 2004	D FY 2005	E FY 2006
1	REVENUES FROM CURRENT RATES	2,422,847	2,441,543	2,404,465	2,434,600	2,452,138
2	OPERATING EXPENSES:					
3	OPERATION & MAINTENANCE	482,245	474,986	474,080	469,779	467,659
4	PURCHASE AND EXCHANGE POWER-					
5	SHORT-TERM POWER PURCHASES [1]	457,608	485,266	449,626	487,688	487,457
6	LONG-TERM POWER PURCHASES	65,904	66,159	66,450	66,977	67,414
7	TROJAN	19,547	14,154	12,564	12,589	12,609
8	WNP NO. 1	178,104	168,240	175,007	168,294	180,376
9	WNP NO. 2	351,536	408,804	404,348	361,649	391,800
10	WNP NO. 3	156,806	156,162	152,401	152,649	151,006
11	RESIDENTIAL EXCHANGE - IOU SETTLEMENT	53,450	53,450	53,450	53,450	53,450
12	FISH & WILDLIFE	131,700	138,000	140,100	142,900	144,400
13	AMORTIZATION OF FISH & WILDLIFE	20,589	22,659	24,554	26,211	27,224
14	CONSERVATION	34,929	33,340	33,640	34,040	34,340
15	AMORTIZATION OF CONSERVATION	59,413	55,662	47,201	43,255	37,726
16	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
17	TOTAL OPERATING EXPENSES	2,107,117	2,174,791	2,133,591	2,121,696	2,159,624
18	INTEREST EXPENSE:					
19	INTEREST ON FEDERAL INVESTMENT-					
20	ON APPROPRIATED FUNDS	251,553	255,161	259,862	266,685	266,724
21	ON LONG-TERM DEBT	64,601	68,691	76,747	78,548	81,734
22	INTEREST CREDIT ON CASH RESERVES	(48,079)	(55,211)	(60,994)	(65,269)	(68,904)
23	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
24	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(2,992)	(2,890)	(2,050)	(2,056)	(2,044)
25	NET INTEREST EXPENSE	217,345	218,223	225,690	233,118	232,720
26	TOTAL EXPENSES	2,324,462	2,393,014	2,359,281	2,354,814	2,392,344
27	NET REVENUES	98,385	48,529	45,184	79,786	59,795

[1] System Augmentation	252,064	290,218	253,541	292,433	279,789
Balancing Power Purchases	205,544	195,048	196,085	195,255	207,668

TABLE 6B
GENERATION CURRENT REVENUE TEST
STATEMENT OF CASH FLOWS
($thousands)

		A	B	C	D	E
		FY 2002	**FY 2003**	**FY 2004**	**FY 2005**	**FY 2006**
1	CASH FROM CURRENT OPERATIONS:					
2	NET REVENUES	98,385	48,529	45,184	79,786	59,795
3	EXPENSES NOT REQUIRING CASH:					
4	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
5	AMORTIZATION OF CONSERVATION/F&W INVESTMENT	80,002	78,321	71,755	69,466	64,950
6	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
7	CASH PROVIDED BY CURRENT OPERATIONS	225,937	177,232	169,234	206,677	184,119
8	CASH USED FOR CAPITAL INVESTMENTS:					
9	INVESTMENT IN:					
10	UTILITY PLANT	(228,000)	(168,700)	(297,500)	(185,525)	(220,225)
11	CONSERVATION	0	0	0	0	0
12	FISH & WILDLIFE	(34,732)	(38,317)	(35,825)	(33,988)	(34,182)
13	CASH USED FOR CAPITAL INVESTMENTS	(262,732)	(207,017)	(333,325)	(219,513)	(254,407)
14	CASH FROM TREASURY BORROWING AND APPROPRIATIONS:					
15	INCREASE IN LONG-TERM DEBT	127,032	125,917	98,425	97,013	97,207
16	REPAYMENT OF LONG-TERM DEBT	(66,000)	(5,622)	(34,582)	(28,781)	(1)
17	INCREASE IN CONGRESSIONAL CAPITAL APPROPRIATIONS	135,700	81,100	234,900	122,500	157,200
18	REPAYMENT OF CAPITAL APPROPRIATIONS	(41,208)	(66,860)	(56,464)	(119,538)	(126,241)
19	PAYMENT OF IRRIGATION ASSISTANCE	0	0	(739)	0	0
20	CASH FROM TREASURY BORROWING AND APPROPRIATIONS	155,524	134,535	241,540	71,194	128,165
21	ANNUAL INCREASE (DECREASE) IN CASH	118,729	104,750	77,449	58,358	57,877

TABLE 7
FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REVENUES FROM CURRENT RATES
REVENUE REQUIREMENT AND REPAYMENT STUDY RESULTS THROUGH THE REPAYMENT PERIOD
($000)

YEAR	A REVENUES (STATEMENT A)	B OPERATION & MAINTENANCE (STATEMENT E)	C PURCHASE AND EXCHANGE POWER (STATEMENT E)	D DEPRECIATION	E NET INTEREST (STATEMENT D)	F NET REVENUES (F=A-B-C-D-E)	G NONCASH EXPENSES 1/ (COLUMN D)	H FUNDS FROM OPERATION (H=F+G)	I AMORTIZATION (REV REQ STUDY DOC,V 2,C 3)	J IRRIGATION AMORTIZATION (STATEMENT C)	K NET POSITION (K=H-I-J)
COMBINED CUMULATIVE											
1977	0	0	0	0	0	0	0	0	0		0
GENERATION											
1978	217,534	40,331	51,130	36,511	81,883	7,679	46,521	54,200	6,937		47,263
1979	189,542	49,347	25,195	39,083	98,889	(22,972)	42,586	19,614	914		18,700
1980	341,863	76,460	182,743	41,237	105,740	(64,317)	94,441	30,124	73		30,051
1981	502,589	92,990	269,625	42,870	118,861	(21,757)	48,941	27,184	4,410 [2]		22,774
1982	1,067,604	115,430	945,442	49,355	145,610	(188,233)	55,427	(132,806)	0		(132,806)
1983	1,485,741	114,960	1,255,810	57,967	153,763	(96,759)	64,039	(32,720)	0		(32,720)
1984	2,248,654	146,870	1,898,859	67,644	170,942	(35,661)	257,382	221,721	192,294 [3]		29,427
1985	2,371,829	137,664	1,898,178	75,711	173,888	86,388	75,711	162,099	37,354		124,745
1986	2,179,326	135,632	1,895,153	84,162	175,257	(110,878)	84,162	(26,716)	10,587		(37,303)
1987	2,014,040	154,184	1,826,711	91,552	199,448	(257,855)	91,552	(166,303)	2,471		(168,774)
1988	2,303,479	183,326	1,796,029	98,288	204,416	21,420	98,288	119,708	149,778		(30,070)
1989	2,273,508	173,694	1,760,205	100,104	189,446	50,059	100,104	150,163	32,875		117,288
1990	2,315,035	198,721	1,527,829	105,338	197,462	285,685	105,338	391,023	63,336		327,687
1991	2,482,482	216,777	1,572,046	103,047	167,559	423,053	103,047	526,100	114,583		411,517
1992	2,142,645	287,360	1,821,930	110,403	169,711	(246,759)	110,403	(136,356)	57,543		(193,899)
1993	2,233,989	309,915	1,868,863	118,143	186,455	(249,387)	118,143	(131,244)	117,974		(249,218)
1994	2,536,059	316,352	1,934,944	125,396	197,222	(37,855)	125,396	87,541	135,018		(47,477)
1995	2,686,700	319,400	1,938,000	136,000	216,600	76,700	136,000	212,700	196,544		16,156
1996	2,744,510	344,516	1,954,260	155,890	208,510	81,334	155,890	222,224 [4]	135,628		86,596
1997	1,996,439	606,872	898,882	148,214	197,238	145,233	101,893	247,126	84,438	25,143	137,545
1998	2,060,750	659,118	1,071,633	162,562	201,930	(34,493)	116,880	82,387	59,315		23,072
COST EVALUATION PERIOD											
1999	2,208,700	708,150	1,088,200	162,557	183,400	66,393	116,317	182,710	27,655		155,055
2000	2,093,000	732,600	990,722	165,100	191,100	13,478	117,345	130,823	50,019		80,804
2001	2,124,000	716,400	1,000,236	170,600	207,400	29,364	122,608	151,972	53,389	16,560	82,023
RATE APPROVAL PERIOD											
2002	2,422,847	648,873	1,282,954	175,290	217,345	98,385	127,552	225,937	107,208		118,729
2003	2,441,543	646,325	1,352,235	176,231	218,223	48,529	128,703	177,232	72,482		104,750
2004	2,404,465	647,819	1,313,847	171,925	225,690	45,184	124,050	169,234	91,046	739	77,449
2005	2,434,600	646,719	1,303,296	171,681	233,118	79,786	126,891	206,677	148,319		58,358
2006	2,452,138	646,398	1,344,111	169,114	232,720	59,795	124,324	184,119	126,242		57,877
REPAYMENT PERIOD											
2007	2,452,138	646,398	1,360,610	169,114	232,796	43,220	124,324	167,544	106,746	2,921	57,877
2008	2,452,138	646,398	1,372,994	169,114	225,749	37,883	124,324	162,207	104,301	29	57,877
2009	2,452,138	646,398	1,355,472	169,114	219,610	61,544	124,324	185,868	120,282	7,709	57,877
2010	2,452,138	646,398	1,353,689	169,114	214,824	68,113	124,324	192,437	134,560		57,877
2011	2,452,138	646,398	1,373,263	169,114	211,589	51,774	124,324	176,098	118,221		57,877

YEAR	REVENUES (STATEMENT A)	OPERATION & MAINTENANCE (STATEMENT E)	PURCHASE AND EXCHANGE POWER (STATEMENT E)	DEPRECIATION	NET INTEREST (STATEMENT D)	NET REVENUES (F=A-B-C-D-E)	NONCASH EXPENSES 1/ (COLUMN D)	FUNDS FROM OPERATION (H=F+G)	AMORTIZATION (REV REQ STUDY DOC,V 2,C 3)	IRRIGATION AMORTIZATION (STATEMENT C)	NET POSITION (K=H-I-J)
2012	2,452,138	646,398	1,395,462	169,114	210,759	30,405	124,324	154,729	96,041	811	57,877
2013	2,452,138	646,398	1,152,744	169,114	201,772	282,110	124,324	406,434	298,761	49,796	57,877
2014	2,452,138	646,398	1,147,289	169,114	189,346	299,991	124,324	424,315	317,884	48,554	57,877
2015	2,452,138	646,398	1,143,234	169,114	174,677	318,715	124,324	443,039	331,061	54,101	57,877
2016	2,452,138	646,398	1,133,330	169,114	159,870	343,426	124,324	467,750	345,609	64,264	57,877
2017	2,452,138	646,398	1,057,003	169,114	142,109	437,514	124,324	561,838	441,715	62,246	57,877
2018	2,452,138	646,398	895,186	169,114	120,597	620,843	124,324	745,167	661,830	25,460	57,877
2019	2,452,138	646,398	1,120,950	169,114	94,266	421,410	124,324	545,734	420,856	67,001	57,877
2020	2,452,138	646,398	1,120,955	169,114	77,230	438,441	124,324	562,765	468,145	36,743	57,877
2021	2,452,138	646,398	1,118,016	169,114	45,853	472,757	124,324	597,081	522,378	16,826	57,877
2022	2,452,138	646,398	1,118,515	169,114	15,086	503,025	124,324	627,349	553,641	15,831	57,877
2023	2,452,138	646,398	1,118,738	169,114	(8,973)	526,861	124,324	651,185	583,645	9,663	57,877
2024	2,452,138	646,398	1,105,273	169,114	(41,271)	572,624	124,324	696,948	617,999	21,072	57,877
2025	2,452,138	646,398	1,104,381	169,114	(71,670)	603,915	124,324	728,239	652,074	18,288	57,877
2026	2,452,138	646,398	1,103,825	169,114	(101,184)	633,985	124,324	758,309	681,556	18,876	57,877
2027	2,452,138	646,398	1,103,825	169,114	(131,017)	663,818	124,324	788,142	293,928	286,864	207,350
2028	2,452,138	646,398	1,103,825	169,114	(135,122)	667,923	124,324	792,247	222,776		569,471
2029	2,452,138	646,398	1,103,825	169,114	(136,403)	669,204	124,324	793,528	182,529		610,999
2030	2,452,138	646,398	1,102,825	169,114	(140,659)	674,460	124,324	798,784	37,938		760,846
2031	2,452,138	646,398	1,102,825	169,114	(137,529)	671,330	124,324	795,654	150,359		645,295
2032	2,452,138	646,398	1,102,825	169,114	(137,760)	671,561	124,324	795,885	140,461		655,424
2033	2,452,138	646,398	1,102,825	169,114	(139,901)	673,702	124,324	798,026	62,747		735,279
2034	2,452,138	646,398	1,102,825	169,114	(140,522)	674,323	124,324	798,647	42,345		756,302
2035	2,452,138	646,398	1,102,825	169,114	(136,289)	670,090	124,324	794,414	189,603		604,811
2036	2,452,138	646,398	1,102,825	169,114	(139,638)	673,439	124,324	797,763	76,768		720,995
2037	2,452,138	646,398	1,102,825	169,114	(138,202)	672,003	124,324	796,327	120,905		675,422
2038	2,452,138	646,398	1,102,825	169,114	(141,360)	675,161	124,324	799,485	13,508		785,977
2039	2,452,138	646,398	1,102,825	169,114	(137,253)	671,054	124,324	795,378	157,084		638,294
2040	2,452,138	646,398	1,102,825	169,114	(141,731)	675,532	124,324	799,856	639		681,560
2041	2,452,138	646,398	1,102,825	169,114	(138,405)	672,206	124,324	796,530	118,296		737,978
2042	2,452,138	646,398	1,102,825	169,114	(140,089)	673,890	124,324	798,214	58,552		739,662
2043	2,452,138	646,398	1,102,825	169,114	(140,137)	673,938	124,324	798,262	54,742		743,520
2044	2,452,138	646,398	1,102,825	169,114	(139,783)	673,584	124,324	797,908	68,740		729,168
2045	2,452,138	646,398	1,102,825	169,114	(138,347)	672,148	124,324	796,472	119,819		676,653
2046	2,452,138	646,398	1,102,825	169,114	(133,750)	667,551	124,324	791,875	280,543		511,332
2047	2,452,138	646,398	1,102,825	169,114	(134,557)	668,358	124,324	792,682	243,904		548,778
2048	2,452,138	646,398	1,102,825	169,114	(135,881)	669,682	124,324	794,006	197,781		596,225
2049	2,452,138	646,398	1,102,825	169,114	(140,051)	673,852	124,324	798,176	58,206		739,970
2050	2,452,138	646,398	1,102,825	169,114	(139,349)	673,150	124,324	797,474	82,164		715,310
2051	2,452,138	646,398	1,102,825	169,114	(137,346)	671,147	124,324	795,471	156,524		638,947
2052	2,452,138	646,398	1,102,825	169,114	(136,223)	670,024	124,324	794,348	188,205		606,143
2053	2,452,138	646,398	1,102,825	169,114	(135,773)	669,574	124,324	793,898	206,728		587,170
2054	2,452,138	646,398	1,102,825	169,114	(141,574)	675,375	124,324	799,699	6,111		793,588
2055	2,452,138	646,398	768,198	169,114	(149,378)	1,017,806	124,324	1,142,130	157,679		984,451
2056	2,452,138	646,398	768,198	169,114	(151,063)	1,019,491	124,324	1,143,815	101,320		1,042,495
GENERATION TOTALS	167,321,821	39,161,123	89,192,636	10,922,105	4,131,780	23,813,178	8,714,514	32,512,692	11,476,226	849,497	18,818,684

[1] CONSISTS OF DEPRECIATION PLUS ANY ACCOUNTING WRITE-OFFS INCLUDED IN EXPENSES.

[2] CONSISTS OF AMORTIZATION ($1,650) AND DEFERRAL PAYMENT ($2,760).

[3] CONSISTS OF AMORTIZATION ($1,342) AND DEFERRAL PAYMENT ($190,952).

[4] REDUCED BY $15,000 OF REVENUE FINANCING.

TABLE 8A
GENERATION REVISED REVENUE TEST
INCOME STATEMENT
($thousands)

		A FY 2002	B FY 2003	C FY 2004	D FY 2005	E FY 2006
1	REVENUES FROM PROPOSED RATES	2,474,596	2,494,261	2,456,270	2,487,226	2,507,271
2	OPERATING EXPENSES:					
3	OPERATION & MAINTENANCE	482,245	474,986	474,080	469,779	467,659
4	PURCHASE AND EXCHANGE POWER-					
5	SHORT-TERM POWER PURCHASES [1]	457,608	485,266	449,626	487,688	487,457
6	LONG-TERM POWER PURCHASES	65,904	66,159	66,450	66,977	67,414
7	TROJAN	19,547	14,154	12,564	12,589	12,609
8	WNP NO. 1	178,104	168,240	175,007	168,294	180,376
9	WNP NO. 2	351,536	408,804	404,348	361,649	391,800
10	WNP NO. 3	156,806	156,162	152,401	152,649	151,006
11	RESIDENTIAL EXCHANGE - IOU SETTLEMENT	53,450	53,450	53,450	53,450	53,450
12	FISH & WILDLIFE	131,700	138,000	140,100	142,900	144,400
13	AMORTIZATION OF FISH & WILDLIFE	20,589	22,659	24,554	26,211	27,224
14	CONSERVATION	34,929	33,340	33,640	34,040	34,340
15	AMORTIZATION OF CONSERVATION	59,413	55,662	47,201	43,255	37,726
16	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
17	TOTAL OPERATING EXPENSES	2,107,117	2,174,791	2,133,591	2,121,696	2,159,624
18	INTEREST EXPENSE:					
19	INTEREST ON FEDERAL INVESTMENT-					
20	ON APPROPRIATED FUNDS	251,553	255,161	259,862	266,685	266,724
21	ON LONG-TERM DEBT	64,601	68,691	76,747	78,548	81,734
22	INTEREST CREDIT ON CASH RESERVES	(50,779)	(59,993)	(67,601)	(73,986)	(80,163)
23	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
24	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(2,992)	(2,890)	(2,050)	(2,056)	(2,044)
25	NET INTEREST EXPENSE	214,645	213,441	219,083	224,401	221,461
26	TOTAL EXPENSES	2,321,762	2,388,232	2,352,674	2,346,097	2,381,085
27	RATE PLEDGE ADJUSTMENT	(6,500)	(6,500)	(6,500)	(6,500)	(6,500)
28	NET REVENUES	159,334	112,529	110,096	147,629	132,687

[1] System Augmentation	252,064	290,218	253,541	292,433	279,789
Balancing Power Purchases	205,544	195,048	196,085	195,255	207,668

TABLE 8B
GENERATION REVISED REVENUE TEST
STATEMENT OF CASH FLOWS
($thousands)

		A FY 2002	B FY 2003	C FY 2004	D FY 2005	E FY 2006
1	CASH FROM CURRENT OPERATIONS:					
2	NET REVENUES	159,334	112,529	110,096	147,629	132,687
3	EXPENSES NOT REQUIRING CASH:					
4	FEDERAL PROJECTS DEPRECIATION	95,288	97,910	100,170	102,215	104,164
5	AMORTIZATION OF CONSERVATION/F&W INVESTMENT	80,002	78,321	71,755	69,466	64,950
6	CAPITALIZATION ADJUSTMENT	(47,738)	(47,528)	(47,875)	(44,790)	(44,790)
7	CASH PROVIDED BY CURRENT OPERATIONS	286,886	241,232	234,146	274,520	257,011
8	CASH USED FOR CAPITAL INVESTMENTS:					
9	INVESTMENT IN:					
10	UTILITY PLANT	(228,000)	(168,700)	(297,500)	(185,525)	(220,225)
11	CONSERVATION	0	0	0	0	0
12	FISH & WILDLIFE	(34,732)	(38,317)	(35,825)	(33,988)	(34,182)
13	CASH USED FOR CAPITAL INVESTMENTS	(262,732)	(207,017)	(333,325)	(219,513)	(254,407)
14	CASH FROM TREASURY BORROWING AND APPROPRIATIONS:					
15	INCREASE IN LONG-TERM DEBT	127,000	125,900	98,400	97,025	97,225
16	REPAYMENT OF LONG-TERM DEBT	(66,000)	(5,622)	(34,582)	(28,781)	(1)
17	INCREASE IN CONGRESSIONAL CAPITAL APPROPRIATIONS	135,700	81,100	234,900	122,500	157,200
18	REPAYMENT OF CAPITAL APPROPRIATIONS	(41,208)	(66,860)	(56,464)	(119,538)	(126,241)
19	PAYMENT OF IRRIGATION ASSISTANCE	0	0	(739)	0	0
20	CASH FROM TREASURY BORROWING AND APPROPRIATIONS	155,492	134,518	241,515	71,206	128,183
21	ANNUAL INCREASE (DECREASE) IN CASH	179,646	168,733	142,336	126,213	130,787

TABLE 9
FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REVENUES FROM PROPOSED RATES
REVENUE REQUIREMENT AND REPAYMENT STUDY RESULTS THROUGH THE REPAYMENT PERIOD
($000)

	A	B	C	D	E	F	G	H	I	J	K
YEAR	REVENUES (STATEMENT A)	OPERATION & MAINTENANCE (STATEMENT E)	PURCHASE AND EXCHANGE POWER (STATEMENT E)	DEPRECIATION	NET INTEREST (STATEMENT D)	NET REVENUES (F=A-B-C-D-E)	NONCASH EXPENSES 1/ (COLUMN D)	FUNDS FROM OPERATION (H=F+G)	AMORTIZATION (REV REQ STUDY DOC,V 2,C 3)	IRRIGATION AMORTIZATION (STATEMENT C)	NET POSITION (K=H-I-J)
COMBINED											
CUMULATIVE											
1977	0	0	0	0	0	0	0	0	0		0
GENERATION											
1978	217,534	40,331	51,130	36,511	81,883	7,679	46,521	54,200	6,937		47,263
1979	189,542	49,347	25,195	39,083	98,889	(22,972)	42,586	19,614	914		18,700
1980	341,863	76,460	182,743	41,237	105,740	(64,317)	94,441	30,124	73		30,051
1981	502,589	92,990	269,625	42,870	118,861	(21,757)	48,941	27,184	4,410 [2]		22,774
1982	1,067,604	115,430	945,442	49,355	145,610	(188,233)	55,427	(132,806)	0		(132,806)
1983	1,485,741	114,960	1,255,810	57,967	153,763	(96,759)	64,039	(32,720)	0		(32,720)
1984	2,248,654	146,870	1,898,859	67,644	170,942	(35,661)	257,382	221,721	192,294 [3]		29,427
1985	2,371,829	137,664	1,898,178	75,711	173,888	86,388	75,711	162,099	37,354		124,745
1986	2,179,326	135,632	1,895,153	84,162	175,257	(110,878)	84,162	(26,716)	10,587		(37,303)
1987	2,014,040	154,184	1,826,711	91,552	199,448	(257,855)	91,552	(166,303)	2,471		(168,774)
1988	2,303,479	183,326	1,796,029	98,288	204,416	21,420	98,288	119,708	149,778		(30,070)
1989	2,273,508	173,694	1,760,205	100,104	189,446	50,059	100,104	150,163	32,875		117,288
1990	2,315,035	198,721	1,527,829	105,338	197,462	285,685	105,338	391,023	63,336		327,687
1991	2,482,482	216,777	1,572,046	103,047	167,559	423,053	103,047	526,100	114,583		411,517
1992	2,142,645	287,360	1,821,930	110,403	169,711	(246,759)	110,403	(136,356)	57,543		(193,899)
1993	2,233,989	309,915	1,868,863	118,143	186,455	(249,387)	118,143	(131,244)	117,974		(249,218)
1994	2,536,059	316,352	1,934,944	125,396	197,222	(37,855)	125,396	87,541	135,018		(47,477)
1995	2,686,700	319,400	1,938,000	136,000	216,600	76,700	136,000	212,700	196,544		16,156
1996	2,744,510	344,516	1,954,260	155,890	208,510	81,334	155,890	222,224 [4]	135,628		86,596
1997	1,996,439	606,872	898,882	148,214	197,238	145,233	101,893	247,126	84,438	25,143	137,545
1998	2,060,750	659,118	1,071,633	162,562	201,930	(34,493)	116,880	82,387	59,315		23,072
COST EVALUATION PERIOD											
1999	2,208,700	708,150	1,088,200	162,557	183,400	66,393	116,317	182,710	27,655		155,055
2000	2,093,000	732,600	990,722	165,100	191,100	13,478	117,345	130,823	50,019		80,804
2001	2,124,000	716,400	1,000,236	170,600	207,400	29,364	122,608	151,972	53,389	16,560	82,023
RATE APPROVAL PERIOD											
2002	2,474,596	642,373	1,282,954	175,290	214,645	159,334	127,552	286,886	107,208		179,678
2003	2,494,261	639,825	1,352,235	176,231	213,441	112,529	128,703	241,232	72,482		168,750
2004	2,456,270	641,319	1,313,847	171,925	219,083	110,096	124,050	234,146	91,046	739	142,361
2005	2,487,226	640,219	1,303,296	171,681	224,401	147,629	126,891	274,520	148,319		126,201
2006	2,507,271	639,898	1,344,111	169,114	221,461	132,687	124,324	257,011	126,242		130,769
REPAYMENT PERIOD											
2007	2,507,271	639,898	1,360,610	169,114	221,537	116,112	124,324	240,436	106,746	2,921	130,769
2008	2,507,271	639,898	1,372,994	169,114	214,490	110,775	124,324	235,099	104,301	29	130,769
2009	2,507,271	639,898	1,355,472	169,114	208,351	134,436	124,324	258,760	120,282	7,709	130,769
2010	2,507,271	639,898	1,353,689	169,114	203,565	141,005	124,324	265,329	134,560		130,769
2011	2,507,271	639,898	1,373,263	169,114	200,330	124,666	124,324	248,990	118,221		130,769

YEAR	REVENUES (STATEMENT A)	OPERATION & MAINTENANCE (STATEMENT E)	PURCHASE AND EXCHANGE POWER (STATEMENT E)	DEPRECIATION	NET INTEREST (STATEMENT D)	NET REVENUES (F=A-B-C-D-E)	NONCASH EXPENSES 1/ (COLUMN D)	FUNDS FROM OPERATION (H=F+G)	AMORTIZATION (REV REQ STUDY DOC,V 2,C 3)	IRRIGATION AMORTIZATION (STATEMENT C)	NET POSITION (K=H-I-J)
2012	2,507,271	639,898	1,395,462	169,114	199,500	103,297	124,324	227,621	96,041	811	130,769
2013	2,507,271	639,898	1,152,744	169,114	190,513	355,002	124,324	479,326	298,761	49,796	130,769
2014	2,507,271	639,898	1,147,289	169,114	178,087	372,883	124,324	497,207	317,884	48,554	130,769
2015	2,507,271	639,898	1,143,234	169,114	163,418	391,607	124,324	515,931	331,061	54,101	130,769
2016	2,507,271	639,898	1,133,330	169,114	148,611	416,318	124,324	540,642	345,609	64,264	130,769
2017	2,507,271	639,898	1,057,003	169,114	130,850	510,406	124,324	634,730	441,715	62,246	130,769
2018	2,507,271	639,898	895,186	169,114	109,338	693,735	124,324	818,059	661,830	25,460	130,769
2019	2,507,271	639,898	1,120,950	169,114	83,007	494,302	124,324	618,626	420,856	67,001	130,769
2020	2,507,271	639,898	1,120,955	169,114	65,971	511,333	124,324	635,657	468,145	36,743	130,769
2021	2,507,271	639,898	1,118,016	169,114	34,594	545,649	124,324	669,973	522,378	16,826	130,769
2022	2,507,271	639,898	1,118,515	169,114	3,827	575,917	124,324	700,241	553,641	15,831	130,769
2023	2,507,271	639,898	1,118,738	169,114	(20,232)	599,753	124,324	724,077	583,645	9,663	130,769
2024	2,507,271	639,898	1,105,273	169,114	(52,530)	645,516	124,324	769,840	617,999	21,072	130,769
2025	2,507,271	639,898	1,104,381	169,114	(82,929)	676,807	124,324	801,131	652,074	18,288	130,769
2026	2,507,271	639,898	1,103,825	169,114	(112,443)	706,877	124,324	831,201	681,556	18,876	130,769
2027	2,507,271	639,898	1,103,825	169,114	(142,276)	736,710	124,324	861,034	293,928	286,864	280,242
2028	2,507,271	639,898	1,103,825	169,114	(146,381)	740,815	124,324	865,139	222,776		642,363
2029	2,507,271	639,898	1,103,825	169,114	(147,662)	742,096	124,324	866,420	182,529		683,891
2030	2,507,271	639,898	1,102,825	169,114	(151,918)	747,352	124,324	871,676	37,938		833,738
2031	2,507,271	639,898	1,102,825	169,114	(148,788)	744,222	124,324	868,546	150,359		718,187
2032	2,507,271	639,898	1,102,825	169,114	(149,019)	744,453	124,324	868,777	140,461		728,316
2033	2,507,271	639,898	1,102,825	169,114	(151,160)	746,594	124,324	870,918	62,747		808,171
2034	2,507,271	639,898	1,102,825	169,114	(151,781)	747,215	124,324	871,539	42,345		829,194
2035	2,507,271	639,898	1,102,825	169,114	(147,548)	742,982	124,324	867,306	189,603		677,703
2036	2,507,271	639,898	1,102,825	169,114	(150,897)	746,331	124,324	870,655	76,768		793,887
2037	2,507,271	639,898	1,102,825	169,114	(149,461)	744,895	124,324	869,219	120,905		748,314
2038	2,507,271	639,898	1,102,825	169,114	(152,619)	748,053	124,324	872,377	13,508		858,869
2039	2,507,271	639,898	1,102,825	169,114	(148,512)	743,946	124,324	868,270	157,084		711,186
2040	2,507,271	639,898	1,102,825	169,114	(152,990)	748,424	124,324	872,748	639		754,452
2041	2,507,271	639,898	1,102,825	169,114	(149,664)	745,098	124,324	869,422	118,296		810,870
2042	2,507,271	639,898	1,102,825	169,114	(151,348)	746,782	124,324	871,106	58,552		812,554
2043	2,507,271	639,898	1,102,825	169,114	(151,396)	746,830	124,324	871,154	54,742		816,412
2044	2,507,271	639,898	1,102,825	169,114	(151,042)	746,476	124,324	870,800	68,740		802,060
2045	2,507,271	639,898	1,102,825	169,114	(149,606)	745,040	124,324	869,364	119,819		749,545
2046	2,507,271	639,898	1,102,825	169,114	(145,009)	740,443	124,324	864,767	280,543		584,224
2047	2,507,271	639,898	1,102,825	169,114	(145,816)	741,250	124,324	865,574	243,904		621,670
2048	2,507,271	639,898	1,102,825	169,114	(147,140)	742,574	124,324	866,898	197,781		669,117
2049	2,507,271	639,898	1,102,825	169,114	(151,310)	746,744	124,324	871,068	58,206		812,862
2050	2,507,271	639,898	1,102,825	169,114	(150,608)	746,042	124,324	870,366	82,164		788,202
2051	2,507,271	639,898	1,102,825	169,114	(148,605)	744,039	124,324	868,363	156,524		711,839
2052	2,507,271	639,898	1,102,825	169,114	(147,482)	742,916	124,324	867,240	188,205		679,035
2053	2,507,271	639,898	1,102,825	169,114	(147,032)	742,466	124,324	866,790	206,728		660,062
2054	2,507,271	639,898	1,102,825	169,114	(152,833)	748,267	124,324	872,591	6,111		866,480
2055	2,507,271	639,898	768,198	169,114	(160,637)	1,090,698	124,324	1,215,022	157,679		1,057,343
2056	2,507,271	639,898	768,198	169,114	(162,322)	1,092,383	124,324	1,216,707	101,320		1,115,387
GENERATION TOTALS	170,066,837	38,836,123	89,293,636	10,922,105	3,591,060	27,423,914	8,714,514	36,123,428	11,476,226	849,497	22,429,420

[1] CONSISTS OF DEPRECIATION PLUS ANY ACCOUNTING WRITE-OFFS INCLUDED IN EXPENSES.

[2] CONSISTS OF AMORTIZATION ($1,650) AND DEFERRAL PAYMENT ($2,760).

[3] CONSISTS OF AMORTIZATION ($1,342) AND DEFERRAL PAYMENT ($190,952).

[4] REDUCED BY $15,000 OF REVENUE FINANCING.

5. REVENUE REQUIREMENT LEGAL REQUIREMENTS AND POLICIES

This chapter summarizes:

- the statutory framework that guides the development of BPA's revenue requirements and the allocation of FCRPS costs among the various users of the system, and
- the repayment policies that BPA follows in the development of its revenue requirement.

5.1 Development of BPA's Revenue Requirements

BPA's revenue requirements are governed by four main legislative acts: The Bonneville Project Act of 1937, P.L. No. 75-329, 50 Stat. 731; the Flood Control Act of 1944, P.L. No. 78-534, 58 Stat. 890, amended 1977; the Federal Columbia River Transmission System Act (Transmission System Act) of 1974, P.L. No. 93-454, 88 Stat. 1376; and (Northwest Power Act), P.L. No. 96-501, 94 Stat. 2697. Other statutory provisions that guide the development of BPA's revenue requirements include the EPA-92, P.L. No. 102-486. 106 Stat. 2776; the Colville Settlement Act, P.L. No. 103-436, 108 Stat. 4577; and the Omnibus Consolidated Rescissions and Appropriations Act of 1996, P.L. No. 104-134, Stat. 132.

5.1.1 Legal Requirement Governing the FCRPS Revenue Requirement. BPA's rates must be set in a manner that ensures revenue levels sufficient to fully recover its costs. This requirement was first set forth in Section 7 of the Bonneville Project Act, 16 U.S.C. § 832f (amended 1977):

Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of Bonneville project) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment over a reasonable period of years.

Development of the FCRPS revenue requirements is a critical component of meeting this ratemaking directive. Section 9 of the Transmission System Act, 16 U.S.C, § 838g, also strongly reflects this cost recovery principle, providing that rates be set:

. . . at levels to produce such additional revenues as may be required, in the aggregate with all other revenues of the Administrator, to pay when due the principal of, premiums, discounts, and expenses in connection with the issuance of and interest on all bonds issued and outstanding pursuant to [this Act,] and amounts required to establish and maintain reserve and other funds and accounts established in connection therewith.

Similar guidelines are provided in Section 7 of the Northwest Power Act, 16 U.S.C. § 839e. Section 7(a)(1), 16 U.S.C. § 839e(a)(1), provides:

The Administrator shall establish, and periodically review and revise, rates for the sale and disposition of electric energy and capacity and for the transmission of non-Federal power. Such rates shall be established and, as appropriate, revised to recover, in accordance with sound business principles, the costs associated with the acquisition, conservation, and transmission of electric power, including the amortization of the Federal investment in the Federal Columbia River Power System (including irrigation costs required to be repaid out of power revenues) over a reasonable period of years and the other costs and expenses incurred by the Administrator pursuant to this Act and other provisions of law. Such rates shall be established in accordance with Sections 9 and 10 of the Federal Columbia River Transmission System Act (16 U.S.C. § 838), Section 5 of the Flood Control Act of 1944, and the provisions of this Chapter.

The Northwest Power Act also makes it clear that a primary purpose of confirmation of BPA rates by FERC is to assure that the revenue requirement is adequate to assure timely U.S. Treasury repayment. Section 7(a)(2), 16 U.S.C. § 839e(a)(2), provides:

Rates established under this section shall become effective only, except in the case of interim rules as provided in subsection (i)(6), upon confirmation and approval by the Federal Energy Regulatory Commission upon a finding by the Commission, that such rates:

A) are sufficient to assure repayment of the Federal investment in the Federal Columbia River Power System over a reasonable number of years after first meeting the Administrator's other costs.

(B) are based upon the Administrator's total system costs; and

(C) insofar as transmission rates are concerned, equitably allocate the costs of the Federal transmission system between Federal and non-Federal power utilizing such system.

In addition to reiterating and clarifying the cost recovery principle, the Northwest Power Act provided supplementary authority to sell bonds to the U.S. Treasury to finance BPA's new conservation and renewable resource programs. 16 U.S.C. § 838i. More recently, the EPA-92 clarified BPA's authority to provide funds directly to the COE and Reclamation for hydroelectric generation additions, improvements, and replacements, as well as O&M expenses. P.L. No. 102-486, 1992 U.S. Code Cong. & Admin. News, 106 Stat. 2776. Other provisions that have particular relevance to the repayment of power costs can be found in the Reclamation Project Act of 1939 (codified as amended in scattered sections of 43 U.S.C.); P.L. No. 89-448, 80 Stat. 200, Act of June 14, 1966, authorizing construction of the Grand Coulee Dam Third Powerhouse; and P.L. No. 89-561, 80 Stat. 707, Act of September 7, 1966, which partially amended P. L. No. 89-48. The costs associated with these projects and programs, as well as the other costs incurred by the Administrator in furtherance of BPA's mission, are included in the Revenue Requirement Study.

5.1.2 Colville Settlement Act Credits. The Colville Settlement Act is a Settlement Agreement between the Confederated Tribes of the Colville Reservation and the Federal government related to the Colvilles' claims for a portion of revenues from Grand Coulee Dam.

The Settlement obligates BPA to make annual payments to the Colville Tribes. BPA's annual payments to the Colvilles begin at $16.0 million annually in 1996 (representing payments for the 1995 year). Payments have been tied to both BPA's average prices and the amount of annual generation from Grand Coulee Dam. Under the Refinancing Act, part of the Omnibus Consolidated Rescissions and Appropriations Act of 1996, P.L. No. 104-13, 110 Stat. 1321, BPA receives annual credits from the U.S. Treasury against payments due the Treasury, in order to defray a portion of the costs of making payments to the Colvilles. The credits for the 2002-2006 rate period are $4.6 million in each fiscal year.

5.1.3 The BPA Appropriations Refinancing Act. As in the prior rate period, BPA's power rates for the FY 2002 - 2006 rate period will reflect the requirements of the Refinancing Act, part of the Omnibus Consolidated Rescissions and Appropriations Act of 1996, P.L. No. 104-134, 110 Stat. 1321, enacted in April 1996. The Refinancing Act required that unpaid principal on FCRPS appropriations (old capital investments) at the end of FY 1996 be reset at the present value of the principal and annual interest payments BPA would make to the U.S. Treasury for these obligations absent the Refinancing Act, plus $100 million. *Id*. at §3201(b). The Refinancing Act also specified that the new principal amounts of the old capital investments be assigned new interest rates from the Treasury yield curve prevailing at the time of the refinancing transaction. *Id*. at §3201(e)(6)(A).

The Refinancing Act restricts prepayment of the new principal to $100 million during the first five years after the effective date of the financing. The Refinancing Act also specifies that repayment periods on new principal amounts may not be earlier than determined prior to the refinancing.

The Refinancing Act specifies that the prevailing U.S. Treasury yield curve will be used to calculate interest during construction (IDC) and to assign interest rates to new capital investments funded by appropriations. New capital investments are defined as capital investments funded by appropriations for a project placed in service after September 30, 1996. The IDC in each fiscal year of construction for new capital investments is the prevailing one-year Treasury rate. *Id*. at §3201(f)(1). The IDC is capitalized and included in the principle. After the plant is completed, the principal amount is assigned an interest rate based on the Treasury yield curve prevailing in the year in which the plant is placed in service. *Id.* at §3201(g).

The Treasury rate for new capital investments prescribed in the Refinancing Act is the rate.

> *determined by the Secretary of the Treasury, taking into consideration prevailing market yields during the month preceding the beginning of the fiscal year in which the [new investment] . . . is placed in service, in outstanding interest-bearing obligations of the United States with periods to maturity comparable to the period between the beginning of the fiscal year and the repayment date for the new capital investment. Id*. at §3201(a)(6)(B).

The Refinancing Act also directed the Administrator to offer to provide assurance in new or existing power, transmission, or related service contracts that the Government would not increase the repayment obligations in the future. The Refinancing Act also amends the Colville Settlement Act to modify the amount and timing of certain credits that BPA takes against its annual cash transfers to Treasury.

5.2 Allocation of FCRPS Costs

In addition to power production, the individual generating projects comprising the FCRPS serve other purposes, including navigation, irrigation, recreation, and flood control. The total costs of these Federal projects are generally allocated according to the purposes they serve.

For projects that provide power resources to the FCRPS, this allocation has generally been accomplished pursuant to statutory direction. For example, Section 7 of the Bonneville Project Act, 16 U.S.C. § 832f, requires that BPA's rates be based, inter alia, on *"an allocation of costs made by the [Federal Power Commission,]"* and, insofar as costs of the Bonneville Project were concerned:

> *the [Federal Power Commission] may allocate to the costs of electric facilities such a share of the cost of facilities having joint value for the production of electric energy and other purposes as the power development may fairly bear as compared with other purposes.*

Similar allocations for projects constructed pursuant to various Reclamation laws have been performed by the Secretary of the Interior under the authority of 43 U.S.C. § 485h(a)-(b). Cost allocations for projects constructed by the COE have also been performed by the Secretary of the Army and approved by the Federal Power Commission.

On a generic level, an attempt is made to allocate the specific cost of each feature of a multipurpose dam to the purpose it serves. For example, the costs of powerhouses, penstocks, and other specific power-related facilities have been allocated to power; whereas, the costs of navigation locks have been allocated to navigation. More problematic are the joint-use costs that remain unallocated after the specific costs identifiable to a single purpose have been allocated. The joint-use formulas attempt to account for the relative benefits provided by each function and costs are allocated accordingly.

Thus, costs assigned to the power production functions include specific cost items whose sole purpose is power production and the "power production share" of joint costs assigned to more than one purpose. Both types of costs are included in BPA's power revenue requirement.

5.2.1 Section 4(h)(10)(C) Credits. Section 4(h)(10)(C) of the Northwest Power Act provides for the Administrator to use 16 U.S.C. § 839b(h)(10)(A):

> *The Bonneville Power Administration fund and the authorities available to the Administrator [under the Northwest Power Act] and other laws administered by the Administrator to protect, mitigate, and enhance fish and wildlife to the extent affected by any hydroelectric project of the Columbia River and its tributaries* . . .

BPA is not obligated to reimburse the U.S. Treasury for the non-power portion of these fish and wildlife costs. Such non-power costs are instead allocated to the various project purposes by the BPA Administrator, in consultation with the COE and Reclamation, pursuant to section 4(h)(10)(C) of the Northwest Power Act. 16 U.S.C. § 839b(h)(10)(C). This allocation to various project purposes is intended to implement the principle that electric power consumers bear no greater share of the costs of fish and wildlife mitigation than the power portion of the project.

The legislative history of section 4(h)(10)(C) illustrates how the expenditures by the Administrator for protection, mitigation, and enhancement of fish and wildlife at individual Federal projects in excess of the portion allocable to electric consumers is to be treated as a credit for electric consumers. *See*, H.R. Rep. No. 976, 96th Cong., 2d Sess., pt. 2 at 45 (1980), reprinted in 1980 U.S.C.C.A.N. 5989, 6011. This principle is satisfied by treating expenditures on behalf of non-power purposes as other project costs. These amounts are regarded as having been applied towards other project costs properly allocable to the power function and payable to the Treasury. Thus, BPA receives a credit against its cash transfers to the U.S. Treasury for expenditures attributable to other project purposes. The cost-sharing arrangements with the Administration implement the section 4(h)(10)(C) directives.

BPA's initial funding of all the costs for fish and wildlife has the advantage of avoiding the need for funding the non-power portion of these costs through the annual appropriations process. For a further discussion of section 4(h)(10)(C) credits *see* Chapter 2.2 of this Study; Volume 1, Chapter 12 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A; Chapter 5.2.3.3 of the Wholesale Power Rate Development Study, WP-02-E-BPA-05; and the Risk Analysis Study and Documentation for Risk Analysis Study, WP-02-E-BPA-03 and 03A.

5.2.2 Equitable Allocation of Transmission Costs. In an order dated January 27, 1984, United States Department of Energy (DOE) - Bonneville Power Administration, 26 FERC 61,096 (1984), FERC directed BPA to, among other things, develop separate repayment studies for the generation and Transmission functions of the FCRPS. The purpose of this requirement was to assist FERC in making the determination required under section 7(a)(2)(C) of the Northwest Power Act (16 U.S.C. § 839e(a)(2)(C)) that transmission costs be equitably allocated between Federal and non-Federal use of the transmission system. This requirement has given BPA a 15-year history of conducting separate repayment studies for the Transmission and generation functions, which has enabled BPA to transition to a bifurcated rate-setting process with minimal change in repayment policy and development of the revenue requirement. Consistent with the decision to conduct bifurcated hearings for the Transmission and generation functions, the Revenue Requirement Study incorporates only the separate repayment study for the generation function of the FCRPS for FY 2002 through 2006.

5.3 Repayment Requirements and Policies

The statutes do not include specific directives for scheduling repayment of the FCRPS capital appropriations and bonds issued to Treasury. The details of the repayment policy have largely been established through administrative interpretation of statutory requirements, with Congressional sanction.

There have been a number of changes in BPA's repayment policy over the years concurrent with expansion of the FCRPS and changing conditions. In general, current repayment criteria were first approved by the Secretary of the Interior on April 3, 1963. These criteria were refined and submitted to the Secretary and the Federal Power Commission (the predecessor agency to FERC) in support of BPA's rate filing in September 1965.

The repayment policy was presented to Congress for its consideration for the authorization of the Grand Coulee Dam Third Powerhouse in June 1966. The underlying theory of repayment was discussed in the House of Representatives' Report related to this authorization, H.R. Rep. No. 1409, 89th Cong., 2d Sess. 9-10 (1966). As stated in that report:

> *Accordingly, in a repayment study there is no annual schedule of capital repayment. The test of the sufficiency of revenues is whether the capital investment can be repaid within the overall repayment period established for each power project, each increment of investment in the transmission system, and each block of irrigation assistance. Hence, repayment may proceed at a faster or slower pace from year-to-year as conditions change.*
>
> *This approach to repayment scheduling has the effect of averaging the year-to-year variations in costs and revenues over the repayment period. This results in a uniform cost per unit of power sold, and permits the maintenance of stable rates for extended periods. It also facilitates the orderly marketing of power and permits Bonneville Power Administration's customers, which include both electric utilities and electro-process industries, to plan for the future with assurance.*

The Secretary of the Interior issued a statement of power policy on September 30, 1970, setting forth general principles that reaffirmed the repayment policy as previously developed. The most pertinent of these principles are set forth in the Department of the Interior Manual, Park 730, Chapter 1:

> *A.* *Hydroelectric power, although not a primary objective, will be proposed to Congress and supported for inclusion in multiple-purpose Federal projects when . . . it is capable of repaying its share of the Federal investment, including operation and maintenance costs and interest, in accordance with the law.*
>
> *B.* *Electric power generated at Federal projects will be marketed at the lowest rates consistent with sound financial management. Rates for the sale of Federal electric power will be reviewed periodically to assure their sufficiency to repay operating and maintenance costs and the capital investment within 50 years with interest that more accurately reflects the cost of money.*

To achieve a greater degree of uniformity in a repayment policy for all Department of Interior (DOI) power marketing agencies, the Deputy Assistant Secretary issued a memo on August 2, 1972, outlining: (1) a uniform definition of the commencement of the repayment period for a particular project; (2) the method for including future replacement costs in repayment studies; and (3) a provision that the investment or obligation bearing the highest interest rate shall be amortized first, to the extent possible, while still complying with the repayment period established for each increment of investment.

A further clarification of the repayment policy was outlined in a joint memo of January 7, 1974, from the Assistant Secretary for Reclamation and Assistant Secretary for Energy and Minerals. This memo states that in addition to meeting the overall objective of repaying the Federal investment or obligations within the prescribed repayment periods, revenues shall be adequate, except in unusual circumstances to repay annually all costs for O&M, purchased power, and interest.

On March 22, 1976, the Department of Interior issued Chapter 4 of Part 730 of the DOI Manual to codify financial reporting requirements for the DOI's power marketing agencies. Included therein are standard policies and procedures for preparing system repayment studies.

BPA and other former DOI power marketing agencies were transferred to the newly established DOE on October 1, 1977. *See* DOE Organization Act, 42 U.S.C. § 7101 et seq. (1994). The DOE has adopted the policies set forth in Part 730 of the DOI Manual by issuing Interim Management Directive No. 1701 on September 28, 1977, which subsequently was replaced by RA 6120.2 on September 20, 1979, as amended on October 1, 1983.

The repayment policy outlined in RA 6120.2, paragraph 12, provides that BPA's total revenues from all sources must be sufficient to:

1. Pay all annual costs of operating and maintaining the Federal power system;

2. Pay the cost each fiscal year of obtaining power through purchase and exchange agreements, the cost for transmission services, and other costs during the year in which such costs are incurred;

3. Pay interest each year on the unamortized portion of the commercial power investment financed with appropriated funds at the interest rates established for each generating project and for each annual increment of such investment in the BPA transmission system, except that recovery of annual interest expense may be deferred in unusual circumstances for short periods of time.

4. Pay when due the interest and amortization portion on outstanding bonds sold to the U.S. Treasury;

5. Repay:

   a. each dollar of power investments and obligations in the FCRPS generating projects within 50 years after the projects become revenue producing (50 years has been deemed a "reasonable period" as intended by Congress, except for the Yakima-Chandler Project, which has a legislated amortization period of 66 years);

   b. each annual increment of transmission financed by Federal investments and obligations within the average service life of such transmission facilities (currently 45 years) or within a maximum of 50 years, whichever is less (BPA has interpreted RA 6120.2 to require repayment of bonds sold to finance conservation to be within the average service lives of these projects, currently estimated to be 20 years, and for fish and wildlife facilities to be 15 years.

   c. the federally financed amount of each replacement within its service life up to a maximum of 50 years; and

6. As required by P.L. No. 89-448, repay the portion of construction costs at Federal reclamation projects that is beyond the repayment ability of the irrigators, and which is assigned for repayment from commercial power revenues, within the same overall period available to the irrigation water users for making their payments on construction costs.

The typical repayment period for appropriated capital investments is 50 years from the year in which the plant is placed in service. The Refinancing Act overrides provisions in RA 6120.2 related to determining interest during construction and assigning interest rates to Federal investments financed by appropriations. This Act also contains provisions on repayment periods (due dates) for these investments. The Refinancing Act is discussed in section 5.1.5 of this Study.

Irrigation costs are repaid without interest. P.L. No. 89-448 authorizes the payment of irrigation costs from revenues of the entire power system. This is consistent with the so-called "Basin Account" concept. P.L. No. 89-561, approved on September 7, 1966, amended P.L. No. 89-448 to provide several limitations on the repayment of irrigation costs from power revenues. These limitations are:

1. the irrigation costs are to be paid from "net revenues" of the power system, with net revenues defined as those revenues over and above the amount needed to cover power costs and previously authorized irrigation payments;

2. the construction of new Federal irrigation projects will be scheduled, i.e., deferred, if necessary, so that the repayment of the irrigation costs from power revenues will not require an increase in the BPA power rate level; and

3. the total amount of irrigation costs to be repaid from power revenues shall not average more than $30 million per year in any period of 20 consecutive years.

In addition, other sections within RA 6120.2 require that any outstanding deferred interest payments must be repaid before any planned amortization payments are made. Also, repayments are to be made by amortizing those Federal investments and obligations bearing the highest interest rate first, to the extent possible, while still completing repayment of each increment of Federal investment and obligation within its prescribed repayment period.

APPENDIX A

FCRPS COST REVIEW IMPLEMENTATION

Documents included:

Fact Sheet #7 – Close out on Cost Review (October 1998)

Fact Sheet #8 – Cost Review Implementation Plan (October 1998)

Cost Review Management Committee Recommendations (March 1998)

(Note: full discussion of the recommendations and explanatory information on the cost baselines are not included. An electronic copy of the full report and all supplemental documents can be seen and/or downloaded from BPA's website, http://www.bpa.gov. A hard copy can be obtained by calling BPA's Public Information Center at 1-800-622-4519).

Updates to Forecast of Generation Expenses (August 1999)

Crosswalk From 1996 Rate Case Revenue Requirement to Initial Proposal for FY 2002-2006 (August 1999)

Crosswalk From Cost Review Baseline to Issues '98 Expense Forecast (August, 1999)

Changes in Generation Expense Forecasts Since Issues '98 (August 1999)

Fact Sheet #7

BPA Targets Cost Savings

Close-out on Cost Review Recommendations

BPA is commiting to achieve savings equivalent to the total recommended earlier this year by a special Cost Review panel convened by the Northwest governors. How BPA will implement the recommendations is detailed in a separate document called the Cost Management Implementation Plan. It is available on request by calling the number at the end of this document or by visiting BPA's Web site at http://www.bpa.gov.

Although BPA is targeting the full annual power expense savings of $131 million for the 2002-2006 period, the Cost Review recommendations present significant challenges for BPA and for its major power suppliers, the U.S. Army Corps of Engineers, Bureau of Reclamation and Washington Public Power Supply System. Many of the panel's recommendations are “stretch goals” that involve costs over which BPA has limited influence. At least one of the recommendations will require new administrative flexibility through legislation. Recognizing these challenges, BPA is committed to aggressively managing its costs and to working with its partners to achieve the full savings.

Background on Cost Review

At the request of the region's governors in July 1997, BPA and the Northwest Power Planning Council sponsored a Cost Review panel that included BPA and council representatives and five “outside” experts. These experts had extensive experience in downsizing large organizations and managing costs in competitive environments. The panel examined BPA's cost structure and cost management strategies and developed specific recommendations to further reduce the costs that BPA will set rates to recover.

The Cost Review covered operation, maintenance and capital investment costs of the Federal Columbia River Power System, including transmission, for fiscal years 2002-2006 — the initial period for new power sales contracts. These include not only the costs that BPA incurs but generation costs of the Corps of Engineers, Bureau of Reclamation and the Washington Public Power Supply System. Fish and wildlife costs were not included in the review because they were being addressed in a separate regional process.

Thank you for participating in Issues ‘98. This public process was designed to give you an overview of and a context for major policy issues surrounding BPA's future. Your input will help BPA develop planning assumptions for our power and transmission rate cases. With the exception of cost-cutting recommendations, Issues ‘98 is not a decision-making process by BPA. Instead, your comments will help inform decisions made in other forums, both within the region and by Congress. This fact sheet focuses on what we heard and what we plan to do next. To learn more about how to participate in the various forums surrounding BPA's future, call (800) 622-4519.

BONNEVILLE
POWER ADMINISTRATION

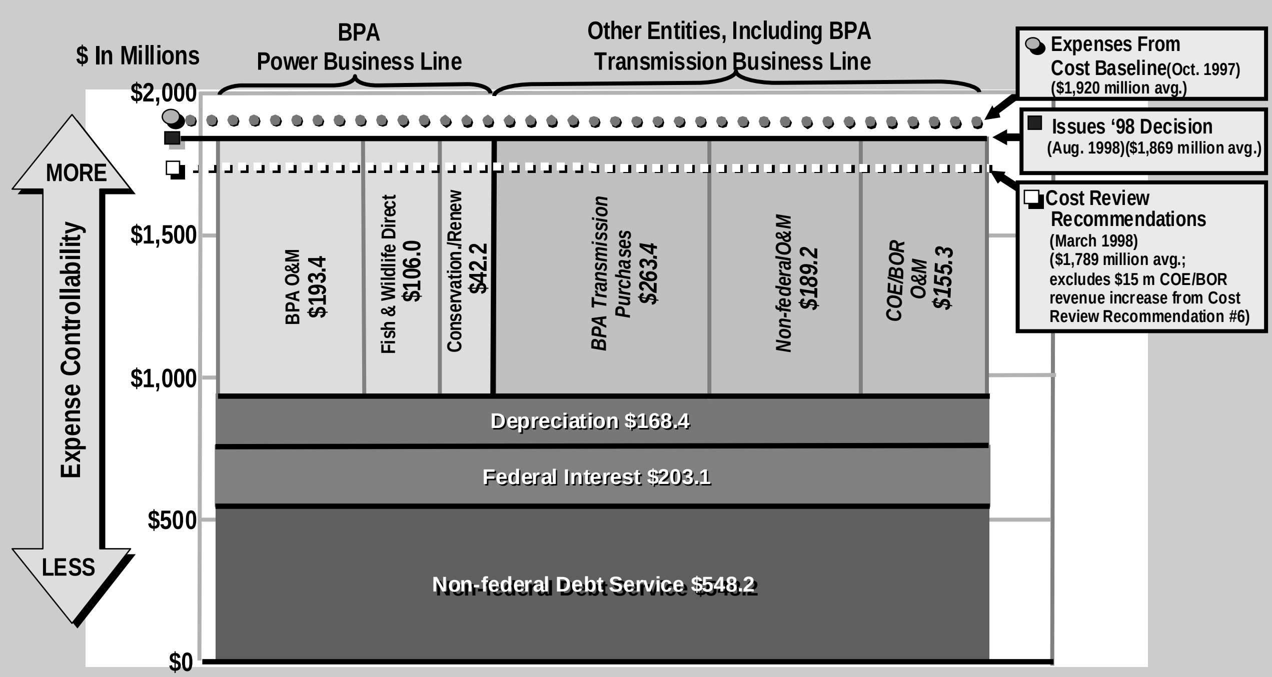
The objective of the Cost Review was to ensure that BPA's near- and long-term power and transmission costs are as low as possible, consistent with sound business practices. This will help ensure BPA can achieve full cost recovery with power rates at or below market levels. Accomplishing this would:

- Give BPA customers and constituents confidence that Federal Columbia River Power System costs are being managed effectively;
- Ensure that the Subscription process — for selling BPA power — results in a high level of customer commitment to BPA;
- Minimize, if not avoid entirely, transition (stranded) costs; and
- Ensure obligations to the U.S. Treasury, third-party bondholders, and fish and wildlife recovery remain at least as secure as they are currently.

Coming Up with Recommendations

In January 1998, the Cost Review panel released a set of draft recommendations that advocated additional cuts to the costs that BPA and other agencies of the Federal Columbia River Power System had planned for the 2002-2006 horizon. In March, following a public comment period, the panel submitted 13 final but advisory recommendations to the BPA administrator for consideration and action. The recommendations called for a combination of reduced federal power expenses ($131 million) from BPA's October 1997 spending forecast and increased revenue through asset management efficiencies ($15 million) in fiscal years 2002-2006 that together should produce annual savings averaging $146 million per year. If fully achieved, this would result in savings averaging $232 million a year from spending estimates in current rates (1997-2001).

FCRPS Power Expense Projections
FY 2002-2006 Averages



- BPA proposes to adopt the Cost Review recommendations, obtaining $125 million in cost reductions from power cost baseline
  - Savings from legislation to improve administrative efficiency/effectiveness not included above (pending development and support for legislation)
- Changes outside Cost Review recommendations: General Transfer Agreements expenses added (+$28 million); treatment of PNCA interchange expenses and revenues modified (-$20 million) and forecast of interbusiness line expenses (BPA transmission purchases) updated (+$66 million).
- Some expenses will change in rates development process, e.g. in-lieu transaction costs for residential exchange, resolution of allocation/functionalization/interbusiness line transaction issues, and federal interest cost and earnings projections.
- In addition, power rate proposal will include a margin for risk management (planned net revenues).

In Issues '98, BPA took public comment on its proposal to accept the recommended savings. Eighty participants in Issues '98 commented on BPA's cost management plan and practices. In general, they called on BPA to demonstrate its sincerity in managing its costs by ensuring that the recommendations are implemented in full. Some commentors wanted to understand what kind of benchmarking or monitoring would be used to measure success, and others wanted assurance that BPA could meet the proposed savings.

Implementing the Cost Savings

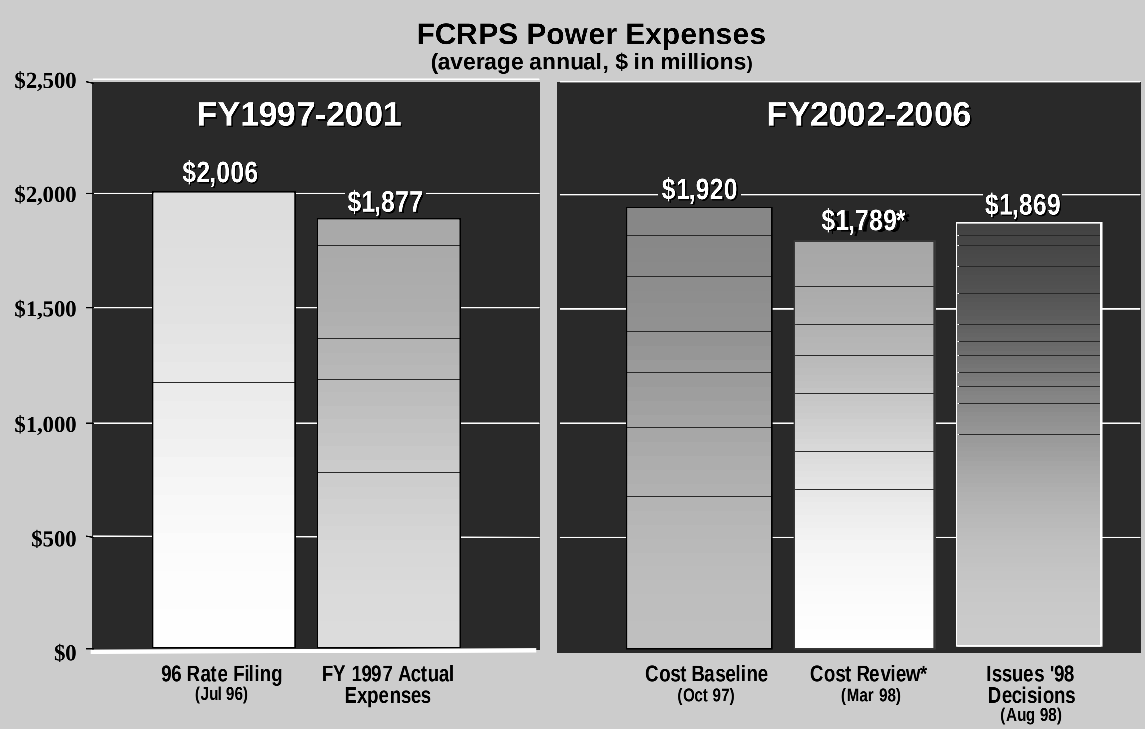
BPA is committed to aggressively managing its costs and to working with its partners to achieve the full total of Cost Review savings. BPA will be including the savings in its power rate proposal. The savings also will be reflected in budgets submitted to Congress and in internal cost management targets. To achieve an estimated $7 million in power savings, BPA must seek new statutory authority for personnel, procurement and property management to further improve efficiency and effectiveness.

BPA has already initiated aggressive changes in internal processes and systems. Although in terms of staffing BPA is at its smallest size since the mid-1960s, the four-year downsizing effort is being extended. Additional reductions in power, corporate and transmission functions are being planned. In addition, BPA will be working with its partners to implement an asset management strategy directed at maximizing the value of the Federal Columbia River Power System for the region.

In the upcoming power rate proceeding, BPA's revenue requirement will include cost components that are not covered in the Cost Review recommendations – in particular, short-term power purchase expense, net costs of the residential exchange, General Transfer Agreement costs, federal interest and depreciation, and

BPA is adopting the full total of the Cost Review recommendations

Issues '98 expenses for initial Subscription period are $137million lower than in current rates



*Excludes the $15 million in Corps of Engineers/Bureau of Reclamation revenue increases recommended by the Cost Review panel (recommendation #6).

- BPA entered Cost Review with an expense baseline for FYs 2002-2006 that was $86 million lower on the power side than expenses in current rates
- Cost Review recommended reducing this power baseline by an additional $131 million (with an additional $15 million in COE/BOR revenues)
- BPA plans to implement the Cost Review recommendations in a manner that would reduce the baseline by $125 million
- 2002-2006 changes to the power baseline outside the Cost Review include the cost of GTAs, as well as adjustments to interbusiness line and PNCA interchange expenses
- Some components of power expenses will change in rates development process this fall. Rates will also include a cash margin (planned net revenues) for risk management

interbusiness line expenses. In addition, BPA's rate proposal will include fish recovery costs and a risk analysis and management plan, including a planned net revenue component for risk. These cost components are subject to change as BPA develops its rate proposal and will be covered in workshops prior to the rate proceeding.

For More Information

In addition to this publication, the publications at the right are available upon request by calling BPA's Public Information Center at 1-800-622-4519. Copies also are available by visiting BPA's Web site at: http://www.bpa.gov. If you would like to speak to someone about any of these issues, please contact BPA using the number above or contact your BPA account executive.

ISSUES98 fact sheets

Fact Sheet #1
Cost Management

Fact Sheet #2
Future Fish and Wildlife Funding — Keeping the Options Open

Fact Sheet #3
Power Markets, Revenues, and Subscription

Fact Sheet #4
Transmission Issues

Fact Sheet #5
Risk Management

Fact Sheet #6
The Region Speaks: Summing Up Issues '98

Fact Sheet #7
BPA Targets Cost Savings: Close-out on Cost Review Recommendations

Fact Sheet #8
Cost Management Implementation Plan

Fact Sheet #9
Issues '98 Comment Analysis

Other documents available

BPA's Power Subscription Strategy Proposal

Issues '98 Comment Analysis

Fish and Wildlife Funding Principles

Bonneville Power Administration
P.O. Box 3621 Portland, Oregon 97208-3621
DOE/BP-3111 October 1998 3.5M

Fact Sheet #8

Cost Review Implementation Plan

BPA is committed to aggressively managing its costs and to working with its partners to achieve the total effect of the Cost Review recomendations: $166 million per year in estimated cost reductions and revenue enhancements. BPA will be including the savings in its power rate proposal. The savings also will be reflected in budgets submitted to Congress and in internal cost management targets. To achieve an estimated $7 million of this effect, BPA must seek new statutory authority for personnel, procurement and property management to further improve efficiency and effectiveness.

BPA has already initiated aggressive changes in internal processes and systems. In terms of staffing, BPA is at its smallest size since the mid-1960s, but our four-year downsizing effort is being extended. Additional reductions in power, corporate and transmission functions are being planned. In addition, BPA will be working with its partners to implement an integrated asset management strategy directed at maximizing the value of the Federal Columbia River Power System for the region.

In the upcoming power rate proceeding, BPA's revenue requirement will include cost components that are not covered in the Cost Review recommendations – in particular, short-term power purchase expense, net costs of the residential exchange, General Transfer Agreement costs, federal interest and depreciation, and interbusiness-line expenses. In addition, BPA's rate proposal will include fish recovery costs and a risk analysis and management plan, including a planned net revenue component for risk These cost components are subject to change as BPA develops its rate proposal and will be covered in workshops prior to the rate proceeding.

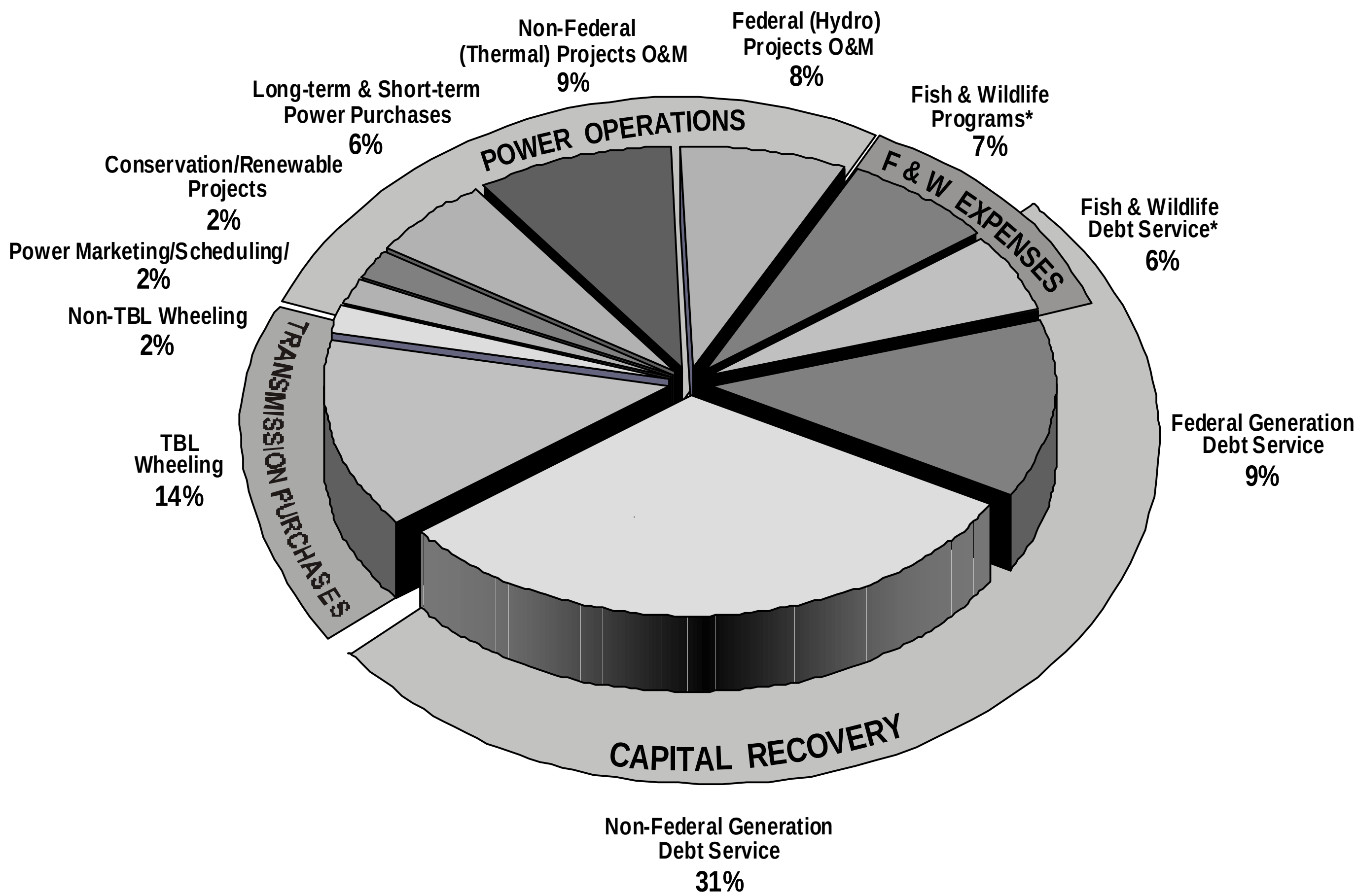
Below are the summaries of the thirteen recommendations of the Cost Review and BPA's implementation plan for each recommendation. The full Cost Review recommendations are available upon request by calling BPA's Public Information Center at 1-800-622-4519. Copies are also available by visiting BPA's Website at: http://www.bpa.gov. If you would like to speak to someone about any of these issues, please contact BPA using the number above or contact your BPA account executive.

Thank you for participating in Issues '98. This public process was designed to give you an overview of and a context for major policy issues surrounding BPA's future. Your input will help BPA develop planning assumptions for our power and transmission rate cases. With the exception of cost-cutting recommendations, Issues '98 was not a decision-making process by BPA. Instead, your comments will help inform decisions made in other forums, both within the region and by Congress. This fact sheet focuses on what we heard and what we plan to do next. To learn more about how to participate in the various forums surrounding BPA's future, call (800) 622-4519.

BONNEVILLE POWER ADMINISTRATION

Composition of Power Business Line Operating Expenses

FY 2002-2006 Average



Projected FY 02-06 Average Power Business Line Operating Expenses

($ in millions)

TBL Wheeling	$263.4	14%
Non-TBL Wheeling	$42.0	2%
Power Marketing/Scheduling	$33.4	2%
Conservation. Renewable Projects	$42.2	2%
Long-term & Short-term Power Purchases	$106.5	6%
Non-Federal (Thermal) Projects O&M	$164.3	9%
Federal (Hydro) Projects O&M	$154.2	8%
Fish & Wildlife Programs (see note below)	$123.5	7%
Fish & Wildlife Debt Service (see note below)	$119.9	6%
Federal Generation Debt Service	$251.6	13%
Non-Federal Generation Debt Service	$568.2	30%
Total PBL Expenses	$1,869.2	100%

** Note: The F&W funding amounts shown here reflect estimates developed for the Cost Review and Issues '98 and do not include operational costs (i.e., power purchases related to fish). Since then, BPA has proposed F&W principles for its power rate case and subscription process which commit BPA to a goal of achieving a high probability of repaying the Treasury taking into account a range of possible F&W funding requirements. This range is not shown here.*

Power Business Line Operating Expenses

($ in millions)	2002	2003	2004	2005	2006	02-06 ave.
1. CSRS Pension Expense	22.1	14.0	12.4	10.6	9.3	13.7
2. Power Marketing & Scheduling	40.4	32.0	24.4	20.1	21.2	27.6
3. Wheeling	42.0	42.0	42.0	42..0	42..0	42..0
4. *ST Purchased Power & Storage*	*80.56*	*87.2*	*75.5*	*72.9*	*77.5*	*78.7*
5. Generation Oversight	3.0	2.9	3.0	3.0	3.1	3.0
6. Conservation & Consumer Services	18.2	16.6	16.9	17.3	17.6	17.3
7. *Fish & Wildlife**	100.0	103.1	106.3	109.6	112.9	106.4
8. Corporate Expenses	7.7	6.6	6.7	6.7	6.7	6.9
9. Planning Council	5.1	5.1	5.1	5.1	5.1	5.1
10. *Corps of Engineers O & M*	108.0	85.0	85.0	84.0	84.0	89.2
11. U.S. Fish & Wildlife O & M	15.4	16.2	17.0	17.9	18.8	17.1
12. Bureau of Reclamation O & M	48.0	49.3	49.3	49.3	49.3	49.0
13. Colville Settlement	16.0	16.0	16.0	16.0	16.0	16.0
14. Renewable Projects	20.3	20.1	20.0	19.9	16.1	19.3
15. WNP-1 & WNP-3 Preservation Costs	3.5	3..6	3.6	3.6	3.6	3.6
16. WNP-2 & O & M Requirements	139.1	148.8	155.7	158.8	164.8	153.4
17. Trojan Decommissioning	9.6	4.2	2.6	2.6	2.6	4.3
18. Between Business Lines	261.5	262.4	265.1	263.9	264.2	263.4
19. LT Power Purchases	26.8	27.2	27.7	28.3	28.8	27.8
20. Undistributed Expense Reduction	(20.0)	(20.0)	(20.0)	(20.0)	(20.0)	(20.0)
21. Non-Federal Projects Debt Service	557.6	594.6	586.2	534.0	568.6	568.2
22. Conservation Financing	5.6	5.6	5.6	5.6	5.6	5.6
23. *Federal Projects Depreciation*	173.1	172.7	167.2	166.2	162.6	168.4
24. *Net Residential Exchange*	0.2	0.2	0.2	0.2	0.2	0.2
25. *Net Federal Interest expense*	222.1	214.8	206.2	195.6	1767.6	203.1
26. Total	1,905.9	1,910.2	1,879.7	1,813.2	1,837.2	1,869.2

The italicized items denote cost categories that are subject to change as BPA completes its revenue requirement for the upcoming power rate case.

** Note: The F&W funding amounts shown here reflect estimates developed for the Cost Review and Issues '98 and do not include operational costs (i.e., power purchases related to fish). Since then, BPA has proposed F&W principles for its power rate case and subscription process which commit BPA to a goal of achieving a high probability of repaying the Treasury taking into account a range of possible F&W funding requirements. This range is not shown here.*

Description of Expenses - Power Business Line

Expenses	
1. CSR Pension Expense	Bonneville expects to cover the full unfunded liability of retirement benefits, pending a review of legal authority. The cost recovery will be phased in over a ten-year period, per agreement with the Administration.
2. Power Marketing & Scheduling	Primarily personnel costs, both federal and contractor FTE, for marketing and selling power and for operation of the Federal Columbia River Power System
3. Wheeling	Primarily General Transfer Agreements (GTA's) costs for wheeling electricity over BPA's customer-owned transmission facilities.
4. *ST Purchased Power & Storage*	Costs associated with the purchase of power from other entities/institutions.
5. Generation Oversight	Personnel costs for management of other entity generation projects such as WPPSS.
6. Conservation & Consumer Services	Primarily existing contract costs for conservation projects/programs.
7. *Fish & Wildlife*	Costs associated with the direct funding of Fish & Wildlife program activities, including personnel.
8. Corporate Expenses	Corporate overhead costs associated with building rents & maintenance, financial services, general services, computer support, security, human resources, etc.
9. Planning Council	Operational costs of the Pacific Northwest Planning Council.
10. *Corps of Engineers O&M*	Annual power generating operation and maintenance costs of the Corps of Engineers
11. U.S. Fish & Wildlife O&M	Annual operation and maintenance costs of the US F&W Lower Snake River Compensation Plan hatcheries program.
12. Bureau of Reclamation O&M	Annual power generating operation and maintenance costs of the Bureau of Reclamation
13. Colville Settlement	Annual payment to the Confederated Tribes of the Colville Reservation for their claims concerning their contribution to the production of hydropower by the Grand Coulee Dam (Settlement Agreement 4/94).
14. Renewable Projects	Wind and geothermal generation project costs.
15. WNP-1 & WNP-3 Preservation Cost	Site restoration costs for the terminated Washington Public Power Supply System nuclear plant.
16. WNP-2 O&M/Capital Requirements	O&M costs for WPPSS nuclear generating plant.
17. Trojan Decommissioning	Decommissioning costs for Trojan nuclear plant.
18. Between Business Line Expense	Primarily transmission costs purchased from the Transmission Business Line (BPA).
19. LT Power Purchases	Contract costs for the purchase of power from other entity generation projects (e.g., Idaho Falls, Cowlitz Falls, Wauna).
20. Undistributed Expense Reduction	Cost reductions identified as necessary but not yet specified.
21. Non-Federal Debt Service	Debt service
22. Conservation Financing	Debt service
23. *Depreciation*	Depreciation is the annual capital recovery expense associated with power plant in service (includes amortization of BPA's investments in energy conservation measures and fish and wildlife projects).
24. *Net Residential Exchange*	Costs associated with providing residential and small farm customers of investor-owned and publicly-owned utilities with the benefits of low-cost Federal power.
25. *Net Federal Interest Expense*	Interest on long-term debt includes interest on bonds that BPA issues to the U.S. Treasury and appropriations used to fund capital projects related to power net of interest and other credits.

The italicized items denote cost categories that are subject to change as BPA completes its revenue requirement for the upcoming power rate case.

Cost Review Recommendation #1:

Further reduce staffing and support costs of power marketing and other Power Business Line functions not directly related to operation of the federal power system.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$50.0 million/year
Cost Review Recommendation (Mar. 98):	$35.3 million/year
Cost Review Annual Savings:	$14.7 million/year
Issues '98 Decision (Aug. 98):	$14.7 million/year

Cost Review Recommendation:

Further reduce staffing and support costs of power marketing and other PBL functions not directly related to operation of the federal power system.

BPA Implementation Plan:

BPA is adopting the Cost Review recommendation for cost and staff reductions as its goal. BPA is pursuing this goal consistent with the broader strategy of managing the FCRPS to maximize its value for the region.

- Steps BPA is taking immediately to achieve this goal:
  - developing standardized power products and contracts to reduce staffing needed for contract administration in the future
  - focusing heavily on a successful subscription process at below market rates with the goal that BPA firm power be subscribed for multi-year periods to reduce the need for future marketing effort
  - investing in improved automated systems for power scheduling and billing
  - using staff from within PBL and other BPA organizations as much as possible when filling key vacancies
  - using early retirement and separation incentives to reduce staff

Challenges/Risks

By themselves, the steps described above may not be enough to achieve the target reductions. The Cost Review assumption was that BPA's cost-based rates would be far below market, making it possible to subscribe all of the system for periods of at least five years, and probably longer. This in turn was assumed to allow large reductions in staffing and support costs for contracting, rate-setting, account executives, customer service and similar functions. ·

- It is not yet clear how close BPA can come to the Cost Review vision of BPA rates far below market and full, long-term subscription. Many of the estimates of future fish mitigation cost scenarios for post-2001 are far higher than the level assumed in the Cost Review. The range of potential fish mitigation costs post-2006 is especially wide. BPA is working to define the range of fish costs it needs to plan to cover. Likewise, there is a wide range of expectations of market price levels after 2001.
- By mid-1999, several events will have occurred that should make more clear whether the Cost Review vision of rates significantly below market can be realized: post-2001 market price expectations will be clearer; the power rate case should be completed; and many customers will have responded to BPA's subscription offer. These events will help to clarify the necessary level of long-term marketing and customer service support. In the meantime, BPA will continue to take the above-described steps toward the Cost Review reductions and will treat the Cost Review recommendation for costs and staffing as its goal.
- Another challenge that has emerged since the Cost Review is increasing staffing demands created by the new California Power Exchange/Independent System Operator operation and the split between BPA's business lines. The new California market has created a substantially increased need for around-the-clock staffing in power scheduling, transmission acquisition and related functions for BPA and many other utilities and marketers on the West Coast. This increases the importance of creating automated systems to bring staffing levels for these core operations back down to Cost Review baseline levels. Nonetheless, these increased demands may result in higher numbers post-2001 in these functions than assumed in the Cost Review baseline staffing levels.

Customer Comments:

Will a reduction in staffing levels erode current improved relationships with customers?

Improved customer relations will continue to be a primary goal for BPA. BPA acknowledges that any significant staffing decrease to the Power Business Line will be across all operations including customer support. However, staffing decreases would follow such counterbalancing efforts as increasing standardization of products and a successful subscription process that decrease staffing need, not erode customer relations.

Cost Review Recommendation #2

Fund regional conservation market transformation at a level proportional to the percent of the regional firm load served by BPA. Carry out a review of the need for, and the appropriateness of, continued Bonneville support beyond the 10-year life established in the Comprehensive Review.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$14.6 million/year
Cost Review Recommendation (Mar. 98):	$10.0 million/year
Cost Review Annual Savings:	$ 4.6 million/year
Issues '98 Decision (Aug. 98):	$ 4.6 million/year

Cost Review Recommendation:

Fund regional conservation market transformation at a level proportional to the percent of the regional firm load served by Bonneville, as called for in the Comprehensive Review. Reductions shown reflect correction to BPA's baseline funding. Work with retail utilities and states to secure funding for conservation market transformation through state public purpose funds, as recommended by the Comprehensive Review. By not later than 2004, carry out a review of the funding available for this activity from other sources and the appropriateness of continued BPA funding beyond the 10-year minimum life established in the Comprehensive Review.

BPA Implementation Plan:

Adopt recommendation. This recommendation is fully consistent with policy direction in the Comprehensive Review.

- The Cost Review figure of $10 million reflects an estimate of BPA's share of the regional firm load in 2002-2006. BPA loads may be a greater or lesser proportion of regional loads; therefore, actual expenditures for market transformation may be higher or lower than $10 million.
- BPA's collection of these costs in its rates will be competitively neutral, assuming that the states enact legislation that requires customer expenditures for market transformation and enables BPA customers to credit BPA funding towards their expenditure obligation. ·
- Work with retail utilities and the states to secure funding for conservation market transformation through state public purpose legislation, as recommended by the Comprehensive Review. ·
- BPA intends to act as an advocate and catalyst to encourage customers to opt for efficiency and renewable resources, helping them explore the value and benefits these have to offer. The subscription proposal contains an initial proposal for an incentive for BPA firm power purchasers to invest in these new conservation and renewable resources. In designing an incentive to encourage conservation and renewables, it's anticipated that support for utilities would be proportional to the amount of power purchased from BPA and that no involuntary income transfers would occur between BPA rate classes or utilities. BPA hopes this proposal will encourage state legislatures and regional power planning organizations to establish direction for the Pacific Northwest's development of conservation and renewable resources.
- By no later than 2004, review appropriateness of continued BPA support.

Customer Comments:

BPA, in the past and currently, has supported energy conservation. You've sold surplus power where it's available to sell. We've paid for it, but it's sold outside the region. Now we're going to have to pay again, with the benefit going outside. How can you achieve equity and be competitive? The cost to Washington might be different from that to Oregon. What are those out of the region going to pay?

Conservation produces benefits day in and day out. Participants always benefit from energy efficiency. The region's benefit is always there but will vary. When the region has a shortage of power, the amount we pay to buy power is reduced. When the region has excess energy or capacity to sell on the market, how much the region gains and how much the out-of-region purchasers pay for the available power will depend on the market value of the power. This can sometimes be substantial. The cost of market transformation will vary by state, depending on loads, but the benefits should also follow because the biggest markets are usually the highest load areas. BPA, through its work on the board of the Northwest Energy Efficiency Alliance, will encourage equity across states and customer classes.

States have not acted to replace BPA's decimated public purposes budgets as recommended by the Review.

BPA and the Cost Review Panel recognize that the commitments of the Comprehensive Regional Review will require constant emphasis in order to be fully implemented. Please see the fourth bullet of the Implementation Plan for further information on how BPA proposes to encourage state participation.

Stabilize market transformation through total participant contribution from all customer groups.

BPA recognizes that without a non-bypassable, competitively neutral distribution charge to fund public benefits as called for in the Comprehensive Review, there may be some utilities or customer groups who will not be contributing to regional market transformation efforts. This is unfortunate, as all will benefit from successful market transformation. The Cost Review Recommendation reiterates the intent of the Comprehensive Review that BPA should not be paying for those who aren't otherwise contributing.

Cost Review Recommendation #3:

Reduce projection of legacy conservation contract and staffing expenses. Allow Bonneville to extend low-income weatherization contracts with the states to be consistent with the end of the legacy contract commitments to the utilities.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$10.0 million/year
Cost Review Recommendation (Mar. 97):	$7.5 million/year
Cost Review Annual Savings:	$2.5 million/year
Issues '98 Decision (Aug. 98):	$2.5 million/year

Cost Review Recommendation:

Reduce projected legacy conservation contract expenses to reflect historical underspending. Do not modify or extend existing contracts, except that the states' low-income weatherization contracts should be extended consistent with the end of the legacy commitment to utilities. Reduce associated staffing.

BPA Implementation Plan:

Adopt recommendation.

- Conservation contractors typically underspend contract budgets. Savings estimates reflect historical underspending trends, however, there remains significant uncertainty on actual utility spending.
- Low-income weatherization agreements with the states will be extended, consistent with the Cost Review recommendation.
- Revised estimates reflect a reduction in associated staffing for this activity.

Customer Comments:

Conservation is still a role BPA needs to play until someone else funds it. BPA should support cost-effective and innovative conservation efforts like the Northwest Energy Alliance and continue follow-through on renewable resource commitments.

BPA will continue to support the Northwest Energy Efficiency Alliance consistent with the Comprehensive Review and the recommendations of the Cost Review. BPA is following through on its commitments to the development of renewable resources.

Cost Review Recommendation #4:

Further reduce staffing/funding for the Northwest Power Planning Council.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$6.2 million/year
Cost Review Recommendation (Mar. 98):	$5.1 million/year
Cost Review Annual Savings:	$1.1 million/year
Issues '98 Decision (Aug. 98):	$1.1 million/year

Cost Review Recommendation:

Further reduce funding for the Council to reflect changes in BPA's regional role, i.e., very limited new resource acquisition while carying out the Council's role in power as recommended by the Comprehensive Review and reflecting the continued importance of fish and wildlife issues. Seek additional funding from other sources for Council activities that are of regional scope. Reductions assume one Council representative per state. A process should be carried out to determine both the functions the region wishes the Council to perform and how the functions should be funded.

BPA Implementation Plan:

Adopt recommendation.

- The reductions may put the Council's capacity to perform independent analysis for the region at risk.
- Once a future role is clarified for the Council, BPA will work with the Council to look for other funding sources for activities that are of regional scope.

Customer Comments:

Will the reduction in funding impose limitations on the Council's ability to make crucial decisions?

The reduction in funding may diminish the Council's ability to perform regional analysis and other tasks. However, after the Council's role has been more clearly defined, BPA will work with the Council to identify other financial resources to support key regional activities.

Cost Review Recommendation #5:

Renewable resource projects: new projects beyond those currently committed must be supported by incremental revenues that cover the additional costs.

	(FY2002-06 Annual Average)
BPA Cost Baseline (May 97):	$24.9 million/year expense
Cost Review Recommendation (Mar. 98):	$22.7 million/year expense
Cost Review Annual Savings:	$2.2 million/year
Issues '98 Decision (Aug. 98):	$2.2 million/year

Cost Review Recommendation:

Provide funding for costs of the three renewable resource projects that BPA currently is planning, and provide currently planned levels of renewable resource data collection and research and development. Annual net cost above project revenues should not exceed $15 million per year, including the data collection and research and development costs. No additional renewable resource projects should be undertaken unless Bonneville's costs are recovered fully by project revenue.

BPA Implementation Plan:

Adopt recommendation.

- BPA is proceeding with development activities on three renewable projects (two geothermal and one wind) that could result in a decision to proceed with construction on two of the projects. These would be in addition to the Wyoming wind project currently under construction.
- We will attempt to hold costs for project development, operation and data collection for these projects to less than $22.7 million per year to ensure the net cost does not exceed $15 million per year.
- We will also continue to market the output from the projects at green power rates, which will maximize cost recovery.
- Additional renewable projects will be acquired only if costs are fully recovered by resulting revenues.

Risks/Challenges

Project costs could be higher than anticipated and actual revenues could be lower or higher than assumed depending on the market.

- BPA might not be viewed as a desirable power supplier by target customers if it cannot meet their demand for new renewables, particularly if the market transformation activities recommended by the Comprehensive Review are implemented.
- The Cost Review rationale is that BPA's core business strategy should not include the development of additional renewable resources or additional related research unless project costs are fully recoverable by project revenues. This may be interpreted by some to be contrary to the Northwest Power Act purposes, which charge BPA broadly with encouraging renewable resource development.

Customer Comment:

We want BPA to ensure that the system is as efficient as it can be and that it becomes cleaner over time.

Please encourage customers to continue renewables development.

Will BPA commit resources to research and development of new technologies in renewable energy and energy conservation?

BPA will continue its support of renewable resource development as mandated by the Regional Act while complying with the cost constraints recommended by the Cost Review.

BPA remains committed to the Cost Review recommendations, specifically the recommendation that BPA fund three renewable resource projects and provide currently planned levels of renewable resource data collection and R&D. While the Cost Review limits BPA's role in expanding the renewables market, our sanctioned development efforts on three renewable projects, combined with the development efforts of other PNW utilities should 1) provide encouragement to developers, 2) provide enough product to supply the market, and 3) stimulate more demand.

BPA seeks to sell these renewable resources, both within and outside the region, at a premium price as "green" power. This marketing effort should allow BPA to respond to (and hopefully to stimulate) market demand for clean resources, to cover resource costs and to encourage others to develop clean green resources for the market. If the market demands it and there is customer support, BPA may seek to develop additional renewable projects, provided that the projects' costs are covered by project revenues.

As mentioned, BPA intends to act as an advocate and catalyst to encourage customers to opt for efficiency and renewable resources, helping them explore the value and benefits these have to offer. The subscription proposal contains an initial proposal for an incentive for BPA firm power purchasers to invest in these new conservation and renewable resources. In designing an incentive to encourage conservation and renewables, it's anticipated that support for utilities would be proportional to the amount of power purchased from BPA and that no involuntary income transfers would occur between BPA rate classes or utilities. BPA hopes this proposal will encourage state legislatures and regional power planning organizations to establish direction for the Pacific Northwest's development of conservation and renewable resources.

Further, BPA has agreed to pay a portion of the market premium realized from the sale of green power to the Bonneville Environmental Foundation to help maximize the development of renewables. The Foundation is not an agency nor an establishment of the United States and payments to the Foundation do not diminish BPA's obligation to fund the development of renewable resources. Foundation activities will complement BPA activities.

The Foundation is a charitable and nonprofit public benefit corporation dedicated to encouraging and funding projects that develop and/or apply clean, environmentally preferred, renewable power, as well as acquire, maintain, preserve, restore, protect, and/or sustain fish and wildlife habitat within the Pacific Northwest.

Cost Review Recommendation #6:

Develop/implement a consolidated/integrated capital/asset management strategy for the FCRPS, including transmission.

US Army Corps of Engineers

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$116.7 million/year – O&M
Cost Review Recommendation (Mar. 98):	$86.7 million/year – O&M
Cost Review Annual Savings:	$30.0 million/year – O&M
	$10.0 million/year – enhanced revenue
Issues '98 Decision (Aug. 98):	$30.0 million/year - O&M
	Revenue enhancement not estimated at this time.

Bureau of Reclamation

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$50.9 million/year – O&M
Cost Review Recommendation (Mar. 98):	$47.9 million/year – O&M
Cost Review Annual Savings:	$3.0 million – O&M·
	$5.0 million/year – Enhanced revenue
Issues '98 Decision (Aug. 98):	$3.0 million/year - O&M
	Revenue enhancement not estimated at this time.

Cost Review Recommendation:

Develop and implement a consolidated, integrated capital/asset management strategy for federal hydro directed at maximizing value, including both financial returns and public benefits. The strategy should encompass the operation and maintenance of the physical assets, a coordinated investment plan, potential consolidation of duplicate administrative support services among FCRPS agencies and the creation of integrated performance measures. Performance should be measured explicitly and reported publicly, accountabilities established and incentives created and applied FCRPS-wide. Estimates include a combination of reduced O&M expenses from the Cost Baseline and increased revenues from higher production.

BPA Implementation Plan:

Adopt the Committee's recommendation as BPA's goal, recognizing that the aggressive cost targets may pose risks to system performance.

- Savings recommendation would require that the Corps manage average annual O&M in FYs 2002-2006 to FY 1996 actual levels.
- BPA will work closely with the other members of the FCRPS to forge and integrate asset management plans directed at maximizing value for the region (financial returns and public benefit returns).
- These plans will further improve operations and maintenance cost management by benchmarking functions against best industry practices and establishing integrated performance measures and incentives to clarify and help ensure performance accountability.
- Potential consolidation of duplicate administrative services will be investigated to gain additional efficiencies.
- The asset management plans will include coordinated investment plans that rigorously analyze investment, disinvestment and divestiture opportunities directed at maximizing the value of the FCRPS.
- At this point, potential savings for the FY2002-2006 period average about $8 million per year for the Corps and $3.6 million per year for Reclamation. As the integrated asset management plans

are developed, additional efficiencies will be identified. These efforts will begin in FY 1999.

- From FY1990 to FY1996 FCRPS hydropower availability decreased from 92 percent to 82 percent, apparently due to underfunding of an aging system. Through collaborative efforts and direct funding arrangements between BPA, the Corps and Reclamation, FCRPS hydropower availability improved to 85 percent in FY1997. To meet the enhanced revenue goal, BPA, the Corps and Reclamation will continue to work collaboratively to increase project generation capability.
- The structure of the FCRPS is such that control over the quality and cost of production is largely separated from the responsibility for marketing and recovering costs. FCRPS entities operate with multiple and often competing purposes and objectives. This complicates forging an integrated asset management strategy. This recommendation requires long-term commitment, determination and creativity from FCRPS owners to maximize financial returns and public benefits for the region.
- Long lead times are involved with these improvements, and all savings may not be available by FY 2002.

Customer Comment:

We recommend BPA work to create "a more businesslike arrangement" with the Corps and Bureau.

BPA should maximize efficiencies in operations and maintenance.

BPA has been working with the Corps and Reclamation to create a closer and more businesslike relationship, and already has achieved some efficiencies as a result. The goal is to create efforts that more easily can be coordinated. While in the past, the structure of the FCRPS separated the responsibilities of quality and cost of production from that of marketing, BPA is committed to work with the Corps and Reclamation to develop an integrated asset management strategy in order to facilitate more businesslike investment and operation decisions.

BPA is attempting to maximize efficiencies in operations and maintenance. We have developed plans to improve operations and maintenance cost management in order to gain efficiencies. These plans include benchmarking of our management functions and operations against the best industry practices. These efforts will improve the operations and maintenance functions and enhance the value of the FCRPS by reducing costs while optimizing system production.

Cost Review Recommendation #7:

WNP-2: Aggressive cost management, flexible response to market conditions.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$172.5 million/year operating expenses
	$153.8 million/year operating revenues
	($18.7) million/year net operating revenues
Cost Review Recommendation (Mar. 98):	zero - net operating revenues
Cost Review Annual Savings:	$18.7 million/year - net operating revenues
Issues '98 Decision (Aug. 98):	$18.7 million/year - net operating revenues

Cost Review Recommendation:

Implement a strategy for Washington Public Power Supply System's nuclear plant, WNP-2, that combines aggressive cost management with a flexible response to market conditions and unforeseen costs. Manage annual operating costs to annual revenues achievable within market constraints. In BPA's subscription process and upcoming rate case, determine how to allocate the plant's costs in BPA rates so that its portion of the Federal Base System on a planning basis can be marketed to ensure full recovery of the plant's operating costs (unless legal or other issues prevent doing so). To the extent revenues can exceed operating costs, use a portion of the resulting net operating revenues to build up the decommissioning fund. Biennially subject the plant's operating costs to a market test. Evaluate termination in the event operating costs are projected to exceed operating revenues. Estimated savings include a combination of reduced O&M expense from the cost baseline and potential increased revenues.

BPA Implementation Plan:

BPA agrees with the basic objective of the Cost Review recommendation "to ensure that the operations of the plant not be insulated from the discipline of the marketplace" and to achieve the recommended increase in net operating revenues.

- BPA intends to subject WNP-2 operating costs to a market test biennially, testing whether market value of the WNP-2 output recovers annual operating costs of the plant. BPA intends to solicit input on the precise nature of this market test in a public process this year.
- Likewise, as recommended in the Review, BPA intends to re-evaluate plant termination if operating costs are projected to exceed revenues achievable at market prices by more than the termination costs.
- With the cost and revenue projections assumed by the Cost Review, this would require about $19 million of operating cost reductions and/or revenue increases. BPA will work with the Supply System to achieve as much of this enhancement of net revenues as possible through reductions in operating costs.
- BPA intends to work with the Supply System to achieve additional operating cost efficiencies, avoid major capital additions, shorten outages and, potentially, change from an annual to a biennial refueling cycle (would reduce from five to two the number of refuelings during the next five-year rate period).
- Cost reductions assume, in part, that there are no major equipment failures and no extensive additional regulation.
- The Cost Review also recommended that BPA market a portion of the FBS equivalent to the planned output of WNP-2 priced in a manner that ensures recovery of the plant's operating costs in the actual sales of the plant's output. Subject to further input, BPA's tentative conclusion is that the problems connected with this piece of the recommendation may not be practicably solvable given several issues that have emerged since the Cost Review: (1) the likelihood that BPA will have insufficient inventory to meet demands for firm

power in its subscription process; (2) additional complexity introduced by the present Fish Funding Agreement; and (3) certain specific aspects of BPA's subscription proposal. It would involve selling a portion of the Federal Base System at a higher price equal to WNP2's operating costs – a legal difficulty – and reduction of the lowest cost subscription inventory when it appears that we will be oversubscribed. WNP-2's operating costs are now so close to the market and to BPA's likely subscription power rates that the cost impact of this separation on both the subscription rate and the theoretical WNP-2 rate would be negligible. Equity concerns among parties with subscription rights over who is left with the higher-priced portion of power would likely exacerbate the oversubscription issues (see Power Markets, Revenues and Subscription Fact sheet). Finally, a robust market test should achieve the bulk of the Cost Review goal without creating the substantial problems connected with putting a higher price on this portion of the subscription inventory.

Customer Comment:

WNP-2 will never be cost effective, but BPA continues to insist on operating it.

Implement the Cost Review recommendation.

Political pressure forced the Cost Review panel to soften its WNP-2 recommendation; however, customers supported full implementation.

BPA has committed to subject WNP-2 operating costs to a market test. This biennial test will determine whether the market value of the WNP-2 output recovers annual operating costs of the plant. As recommended in the Cost Review, BPA will evaluate plant termination if operating costs are projected to exceed revenues achievable at market prices by more than the termination costs.

Cost Review Recommendation #8:

Reduce Administrative and Other Internal Support Service Costs.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$15.4 million/year - PBL portion of corporate overhead
Cost Review Recommendation (Mar. 98):	$6.9 million/year - PBL portion of corporate overhead
Cost Review Annual Savings:	$8.5 million/year - direct PBL savings
Issues '98 Decision (Aug. 98):	$8.6 million/year - direct PBL savings
	$5.9 million/year - indirect PBL savings from lower
BPA transmission costs	$14.5 million/year - total PBL savings

Cost Review Recommendation:

Further reduce the cost of BPA administrative and other internal support service costs, including financial, human resources, information management, procurement, strategic planning, public affairs, legal services and other internal service costs, by an aggregate 50 percent from 1996 actual levels. Achieve through redesign of shared services, benchmarking, adoption of industry "best practices," implementation of enterprise software and outsourcing of non-core functions where economic.

BPA Implementation Plan:

Adopt recommendation.

- Shared services redesign focuses on fundamental service activities across BPA, i.e., within each business line as well as within corporate.
- Savings from this effort will, therefore, lead to lower corporate costs and lower business line costs.
- Initial implementation of shared services redesign, including a reorganization of corporate shared services (the Business Services Group), is set for FY 1999. Full implementation will be completed by start of FY 2002. The precise breakdown of savings in corporate and the business lines will not be available until the redesign is complete.
- Also included in the cost savings here are reductions in administrative activities not a part of the shared services redesign effort, such as strategic planning, public affairs and legal services.
- Currently, BPA assumes the $31.7 million savings total will be applied as an average annual reduction to the FY 2002-2006 cost baselines and that the savings are achieved proportional to the distribution of corporate overheads to the business lines.
- BPA anticipates making a final decision on an enterprise software package in FY 1999, with implementation following immediately.

Customer Comment:

No comments received.

Cost Review Recommendation #9:

Obtain legislation to improve administrative effectiveness and efficiency.

	(FY2002-2006 Annual Averages)
Cost Review Recommendation (Mar. 98):	$7.0 million/year - PBL savings
Cost Review Annual Savings:	$7.0 million/year – PBL savings
Issues '98 Decision (Aug. 98):	not assumed

Cost Review Recommendation:

Obtain legislative changes in the areas of personnel management and procurement to improve administrative flexibility and ability to manage internal costs.

BPA Implementation Plan:

Adopt this recommendation by developing draft legislation in consultation with customers, constituents, employees, unions, the administration and the Northwest delegation. Such legislation would remove statutory barriers to improving the efficiency and effectiveness of human resource management and procurement and property management. These changes would give BPA greater flexibility to mold its internal administrative operations to the needs of the changing electricity industry and markets.

- Savings are estimated at $10 million per year in total, approximately $7 million of which would reduce PBL expenses.
- Issues '98 expense projections do not include these savings at this time. Although the Transition Board is now addressing this proposal, legislation has not yet been drafted, and regional, administration and congressional support is not yet clear.
- BPA cannot include these savings in its rate proposal until there is reasonable assurance that legislation will be enacted.

Customer Comment:

No comments received.

Cost Review Recommendations #10/11:

Federal Power Act conformance (cost allocation and functionalization) and reduced transmission internal costs.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$236.9 million/year - PBL transmission purchases
Cost Review Recommendation (Mar. 98):	$205.4 million/year - PBL transmission purchases
Cost Review Annual savings:	$30.0 million/year - reduction (power)/increase (transmission)
–from functional separation and FPA conformance	$1.5 million/year - from TBL cost reductions
Issues '98 Decision (Aug. 98):	$30.0 million/year - reduction (power)/increase (transmission)
– from functional separation and FPA conformance	$1.5 million/year - from TBL cost reductions

Cost Review Recommendation:

Further reduce transmission internal O&M expenses through improved efficiencies. Conform to functional separation and FPA requirements, adjusting and correcting allocation, functionalization and interbusiness-line transaction costs between power and transmission business lines.

BPA Implementation Plan:

Assume recommended cost savings to BPA's power business line.

- BPA's transmission business line has established a continuous performance improvement effort that relies on benchmarking to identify specific initiatives for cost-efficiency improvements throughout the organization and has a good recent track record.
- The adjustment and correction moving $30 million in estimated power costs to transmission is a very conservative assumption about interbusiness-line transactions and FPA conformance. These issues will be addressed in the upcoming rate case.

Customer Comment:

BPA has suggested cost shifts from power to transmission. BPA should not assume FERC FPA regulation will agree.

There are associated risks and challenges with implementation of most of the recommendations. As mentioned above, interbusiness-line transactions as well as FPA conformance issues will be discussed in the upcoming rate case. BPA's objective is to conform with FPA requirements for functionalizing costs.

Cost Review Recommendation #12:

Further reduce federal and non-federal debt service.

	(FY2002-06 Annual Average)
BPA Cost Baseline (Oct. 97):	$963 million/year
Cost Review Recommendation (Mar. 98):	$943 million/year
Cost Review Annual Savings:	$20 million/year
Issues '98 Decision (Aug. 98):	$20 million/year

Cost Review Recommendation:

Further reduce federal and non-federal debt service expenses through refinancings, greater reliance on variable rate debt and other debt reduction actions.

BPA Implementation Plan:

Adopt recommendation.

- Base for calculating savings: non-federal debt service and federal interest expense. Excludes interest credit on cash reserves and "capitalization adjustment" associated with Appropriations Refinancing Act.
- Achieving a full $20 million annual savings in Power Business Line may well require issuance of additional unhedged variable rate exposure, which carries higher financial risk.

Strategies

Refinance high-interest callable Treasury bonds.

- Limited restructuring of Treasury and Supply System debt for interest rate efficiencies. Issue Supply System variable rate debt up to asset/liability match.
- Redeem highest-cost fixed rate Supply System debt in open market while maintaining lower-cost variable rate debt.
- Reduce debt through revenue-financing new investment or accelerating repayment of existing debt to extent financial reserves and risk tolerances allow.

Key Assumptions

Refinancings can be completed while interest rates are relatively low.

- Impact on stakeholders – Net Billing Participants are not materially affected by restructuring of WNP-2 debt because all WNP-2 is debt still paid off by 2012.
- Bond counsel approval required for limited restructuring of WNP-2 debt.

Customer Comment:

No comments received.

Cost Review Recommendation #13:

Account for previously identified "undistributed reductions."

	(FY2002-06 Annual Average)
Cost Review Annual Savings:	$(19.4) million/year
Issues '98 Decision (Aug. 98):	$(19.4) million/year

Explanation:

These were already included in the PBL baseline expense projections. Thus, while the Cost Review's specific recommendations total $166 million for the Power Business Line, the net change from the power cost baselines is $145.7 million.

Bonneville Power Administration

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DOE/BP-3107 October 1998 2M

The hard copy included excerpts from the final report of the Management Committee Recommendations (it includes material from the beginning of the document to the section titled Management Committee's Recommendations, approximately 10 pages). The full text of the report is available at the web site below.

http://www.nwppc.org/cost_fin.htm

Updates to Forecast of Generation Expenses

As indicated in Fact Sheet #7, "BPA Targets Cost Savings, Close-out on Cost Review Recommendations" (included in this Appendix), BPA is committed to achieving savings equivalent to the total recommended in the Cost Review. The recommendations called for annual power expense savings of $130.7 million, with additional revenue offsets of $15 million. Combined, the total recommended savings is $145.7 million. As shown in the following table, "Crosswalk from the Baseline used in the Cost Review to the Issues '98 Generation Expense Forecast," the Issues '98 expense forecast incorporated the full savings anticipated by the Cost Review, with the exception of recommendation #9, which called for $7.0 million in savings from legislative changes in the areas for personnel management and procurement to improve administrative flexibility. This savings amount was withheld pending reasonable assurance that such legislation will be enacted. (BPA continues to withhold these savings from this rate proposal). The Issues '98 generation expense forecast was $1,869.2 million (FY 2002-2006 annual average).

The annual generation expenses reflected in these revenue requirements are, on average, $488.7 million higher than the forecast shown in Issues '98. The details of this increase are shown in the accompanying table "Change in Generation Expense Forecasts since Issues '98". This expense increase is accompanied by an offsetting revenue increase of $33.3 million. The revenue increase, captured in the revenue forecast, reduces the costs that need to be recovered from rates. In summary, the net increase is due to:

1. *Implementation of the Subscription Strategy, and expense changes resulting from the revenue requirements and rates development process.* In the Cost Review and Issues '98, expenses were developed using preliminary estimates of certain costs that are influenced by the Subscription Strategy and by the rates development process (*see* pg. 3 of Issues '98 Fact Sheet #7 in this Appendix). These costs, including system augmentation and balancing purchases (short-term power purchases) and the net costs of the proposed settlement of the Residential Exchange Program, have been updated increasing average annual expenses by $450.2 million. For a fuller discussion of the Subscription Strategy and the power purchase expenses and Residential Exchange settlement expense required to meet, among other factors, higher loads than projected resource supply, please *see* the Wholesale Power Rate Development Study and Documentation for Wholesale Power Rate Development Study, WP-02-E-BPA-05, WP-02-E-BPA-05A and WP-02-E-BPA-05B, and the Testimony of Burns, *et al.*, WP-02-E-BPA-08.

2. *Implementation of the Fish and Wildlife Funding Principles (Principles).* As noted in Issues' 98 (*see* footnote to the table entitled "Projected FY 02-06 Average PBL Operating Expenses," pg. 2 of Issues '98 Fact Sheet #8 in this Appendix), the fish and wildlife funding amounts included in the Cost Review and in Issues '98 were based on a single, lower-cost funding alternative for fish and wildlife recovery O&M and capital recovery expenses. These amounts did not take into account the broad range of possible fish and wildlife funding requirements outlined in the Principles.

3. The revenue requirements in this Study incorporate higher COE, Reclamation, and BPA O&M and capital recovery expenses to reflect the averaging of the O&M and capital investment costs of the 13 system configuration alternatives that is called for in the Principles (s*ee* Volume 1 of Document for Revenue Requirement Study, WP-02-E-BPA-02A, Chapter 13) (average annual change: $70.5 expense increase, with an offsetting revenue increase of $5.0 million from non-fish & wildlife related activities, resulting in a net increase of $65.5 million);

4. *Changes in costs caveated as subject to change in the revenue requirements and rate setting process.* The revenue requirement forecast incorporates a number of changes to cost areas that were acknowledged in the Cost Review and Issues '98 to be subject to change as revenue requirements and rates are set (*see* pg. 1 of Issues '98, Fact Sheet #8 in this Appendix). These include an updated estimate of General Transfer Agreement (GTA) costs, the inclusion in the generation revenue requirement of the expenses and offsetting revenues associated with energy efficiency activities, and a new estimate of inter-business line transaction expenses reflecting revisions to both the forecasted amount and price of transmission purchases from BPA's Transmission Business Line and a resolution of functionalization and ancillary services issues. Federal Power Act conformance issues, including functionalization and ancillary services, are addressed in the testimonies of DeWolf, *et al.*, WP-02-E- BPA-13; DeClerck, *et al.*, WP-02-E-BPA-26; and Homenick, *et al.*, WP-02-E-BPA-27. (Average annual change: $82.5 million expense decrease, with an offsetting revenue increase of $13.3 million, resulting in a net decrease of $95.8 million);

5. *Changes in savings estimates associated with Cost Review recommendations*. There is one correction in this category. This change represents a technical correction to the estimate of savings required to meet the Cost Review recommendation on internal administrative and support service costs. The Cost Review recommendation was to reduce the cost of BPA's administrative and other internal support service costs, including financial, human resources, information management, procurement, strategic planning, public affairs, legal services and other internal service costs, to 50 percent of 1996 actual levels. The Cost Review estimated that the reduction from the cost baselines needed to achieve this 50 percent level was $31.7 million, resulting in an expense level for internal administrative and support service costs of $25.1 million, with the generation function portion being $6.9 million (annual average for FYs 2002 - 2006).

   The Cost Review's estimate of the savings needed to achieve the 50 percent target were overstated. Actual 1996 results for the functions covered are an estimated $80 million, meaning that the cost target should be $40 million. Making this correction, and using the revised overhead allocation methodology incorporated in these revenue requirements, the spending level in the revenue requirement is an average of $17.6 million per year for FY 2002 - 2006 in the generation function, or $10.8 million higher than reflected in the Cost Review. Revisions to the methodology for overhead allocation are addressed in the testimony of DeWolf, *et al.*, WP-02-E- BPA-13.

   With this correction, the savings incorporated in this revenue requirement from expense reductions associated with the Cost Review recommendations are $113 million, a difference of $18 million from the $131 million originally forecasted. As indicated, this difference is due to excluding the savings of recommendation #9 (Legislation to improve administrative effectiveness: $7 million) and the correction to recommendation #8 (Administrative and other internal services costs: $11 million).

GENERATION EXPENSES

Crosswalk of Final Proposal Revenue Requirement for FYs 1997-2001
to Initial Proposal Revenue Requirement for FYs 2002-2006

Description	Gen 1996 Final Rate Proposal FYs 1997-01*		Initial Proposal Revenue Requirement FYs 2002-06	Difference	Remarks
	Average During Period ($ in millions)				
Power Marketing & Scheduling	40.7		24.7	(16.0)	Reduced staffing and support services
Wheeling (GTAs)	36.9	*	52.0	15.1	Increase in GTA Costs
ST Prch Pwr / PNCA Intrchng	74.9		475.6	400.7	Includes purchases to supplement firm inventory to meet proposed firm power sales and balancing power purchases to enhance system flexibility
Generation Oversight	30.5		3.0	(27.5)	Termination of various generation contracts in FYs 1997-01
Conservation & Consumer Services	29.6		17.3	(12.3)	Phasing out of legacy conservation programs
Energy Efficiency O&M	0.0		10.3	10.3	Previously included in conservation, offset in large part by revenues
BPA Fish & Wildlife O&M	99.3		139.4	40.1	Ramp up from current MOA to spending assumption in fish funding principles
CSRS Pension Expense	0.0		17.1	17.1	New requirement: fully fund Civil Service pension and post-retirement benefits
Administrative & Support Services	--		17.6	17.6	1996 rates included corp. expenses of $16.1m, distributed over several cost line items; these are now shown in aggregate in rev. requirement. The $17.6m is consistent with Cost Review recommendation to reduce agency administrative and support services costs ot 50% of '96 actuals
Planning Council	8.2		5.1	(3.1)	Cost Review; reduction may require legislation
Corps of Engineers O&M	97.8		111.2	13.4	Ramp-up in fish O&M per fish funding principles. Generation O&M held flat at 1996 actual levels
U.S. Fish & Wildlife O&M	16.9		17.1	0.2	
Bureau of Reclamation O&M	39.7		48.0	8.3	Cultural resource mitigation and higher fish investment
Colville Settlement	15.3		16.0	0.7	
Renewable Projects	6.1		20.0	13.9	Consistent with Comp & Cost Reviews; revenue offsets limit losses to no more than $15m/yr
WNP-1 & WNP-3 Preservation Costs	3.3		3.5	0.2	
WNP-2 O&M/Capital Requirements	164.7		168.5	3.8	Additional decommiss. costs; purch of nuclear fuel; Cost Review savings relected as rev enhance.
Trojan Decommissioning	18.0		4.3	(13.7)	
Between Business-line Expense	295.4	*	160.6	(134.8)	Cost of purchasing transmission service (under Subscription, primary products are undelivered power). In '96 rate case, all power was delivered product)
LT Power Purchases	22.0		27.8	5.8	
Non-Federal Projects Debt Service	601.0		568.2	(32.8)	Refinancing (principle reshaped and interest reduced)
Conservation Financing	7.5		5.6	(1.9)	
Federal Projects Depreciation	171.9		172.8	0.9	
Net Res Exch (IOU Sub. Settlement)	89.4		53.5	(36.0)	FY 2002-2006 IOU Subscription Settlement Payments: difference BPA's est cost to purchase 800 MW and revenue if sold @ PF
Net Federal Interest Expense	224.4		218.6	(5.8)	Higher interest credit due to reserve levels, higher interest due to fish recovery obligations
Total	**2093.5**	*****	**2358.0**	**264.5**	

** Adjustments for comparison purposes. In 1996 rate proposal, wheeling costs were functionalized to transmission, not power, and "between business line expenses" were the portion of the transmission revenue requirement that was included in bundled power*

NOTE: this table does ***not*** include planned net revenue component of revenue requirement

Crosswalk from the Baseline used in the Cost Review to the Issues '98 Generation Expense Forecast

($ in millions, FY 2002-2006 averages)

	Revenue Offsets	Expenses
Power Cost Baseline (Starting point for Cost Review) - Oct. 97		**$ 1,920.2**
Cost Review Recommendation Reductions	***$ (15.0)***	***$ 130.7***
Cost Review Baseline less Recommendation Reductions - Oct. 98	**$ (15.0)**	**$ 1,789.5**
Issues '98 implementation of Cost Review Recommendations		
Savings from legislation to improve administrative efficiency/effectiveness (Cost Review Recommendation#9) not included in Issues '98 expense estimates pending development and support for legislation		**$ 7.0**
Changes in Other Costs Not Covered by Cost Review recommendations		
Inclusion of General Transfer Agreement Wheeling costs		**$ 28.2**
Change to expense portion of interbusiness line transactions		**$ 63.9**
Revised estimate of Short Term power purchases		**$ (5.5)**
BPA F&W O&M costs revised to include inflation (inadvertently left out of Cost Baselines)		**$ 9.0**
Revised forecast of Interest including impact of cost reductions on interest credit and other changes to outstanding debt		**$ (10.9)**
Revised forecast of Depreciation		**$ (16.6)**
Miscellaneous revisions		**$ 4.6**
Issues '98 Forecasts for Power - Sept. 98	**$ (15.0)**	**$ 1,869.2**

Change in Generation Expense Forecasts since Issues '98

($ in millions, FY 2002-2006 averages)

	Revenue Offsets	Expenses
Issues '98 - Sept. 98	**(15.0)**	**1869.2**
Changes in Costs Due to Implementation of the Subscription Strategy and Rates Development		
Increase in system augementation and balancing purchases to supplement forecast system loads		**396.9**
IOU subscription settlement payments: cost difference for purchase of 800 aMW at BPA's market forecast vs. the rate paid by IOUs for their subscription power purchases		**53.3**
Changes in Costs Attributable to Fish and Wildlife Funding Principles		
Increase in BPA FWL (direct program) O&M; Issues '98 assumed a low forecast of $106 million, whereas the Principles call for an average estimate between the low and high cost alternatives ($139 million)		**33.0**
Corps O&M; increased from Issues '98 to reflect the Principles, while accommodating requirements of the hydro system	**(5.0)**	**22.0**
Increase in Federal interest expense due to lower reserve assumptions and lower interest earnings, and higher projected investment for fish spending		**15.5**
Changes in Costs Caveated as subject to change in the Revenue Requirement and Rate Setting Process		
Increase in wheeling expense due to GTA's. Issues '98 included $40 million for GTA's. BPA now forecasts an additional $10 million for an average annual total of $50 million in generation function		**10.0**
Inclusion of Energy Efficiency spending and revenues in power rates	**(13.3)**	**10.3**
Changes to expense portion of interbusiness line transactions reflecting revised forecasts of both the price and amount of transmission services purchases and resolution of functionalization and ancillary services issues.		**(102.8)**
Changes in Costs Included in Cost Review Recommendations		
Correction to Cost Review savings target in administrative & support services costs.		**10.8**
WNP-2 operations due to shift to 2-year refueling cycle and higher than originally forecasted fuel costs.	**(15.0)**	**15.0**
Remove placeholder for Debt Service Savings (Cost Review Recommendation #12), shown as an undistributed expense reduction in Issues '98. These savings are captured in the interest shown in the revenue requirement.		**20.0**
Miscellaneous Small Changes		**4.7**
Subtotal Changes in Offsetting Revenues and Expenses since Issues '98	***(33.3)***	***488.7***
Total Offsetting Revenues and Expenses in Initial Proposal - June '99	**(48.3)**	**2358.0**

APPENDIX B

THE REPAYMENT PROGRAM

1. REPAYMENT PROGRAM OPERATION

1.1. Purpose

The major purpose of the repayment program is to determine, consistent with applicable Federal statutes and RA 6120.2, whether a given set of annual revenues is sufficient to repay with interest the long-term obligations on the generation investment. The program calculates amortization and interest when determining the minimum revenue level necessary to recover these obligations.

1.2. Computation of Revenues Available for Interest and Amortization

Given a set of revenues and expenses for each year, a set of annual revenues available for interest and amortization can be obtained by subtracting non-investment-related expenses such as O&M expense, purchased power, and exchange costs from revenues (equation 1 below). This revenue subset can then be used to make interest expense and amortization payments on generation-related appropriations and bonds.

(1) $\text{revenues available for interest and amortization}_i =$

$\text{revenues}_i - \text{expenses}_i, \qquad i=1,2,...,n,$

where n is the total number of years in the study.

1.3 Computation of Revenues Available for Amortization Payments

For each year, the revenues available for interest and amortization, less interest expense, are used to make amortization payments on the generation obligations (equation 2 below). It should be noted that the repayment program recognizes the unique nature of <u>each</u> of the generation investments and associated obligations. The program uses data for approximately 1,700 specific investments for generation. The project name, amount of principal, interest rate, in-service date, due date, and the nature of the investment are described for each investment.

(2) revenues available for interest and amortization$_i$ - interest expense$_i$ = $\sum_{j=1}^{m}$ amortization payment$_{ij}$, i=1,2,...n,

where m is the total number of Federal investments.

1.4. Computation of Principal Payments Given Due Dates

The amortization payments on each investment must total the investment's principal on or before its due date (equation 3):

(3) $\sum_{i=1}^{n}$ payment$_{ij} \leq$ principal$_j$, j=1,2,...m.

1.5. Ordering of Payments According to Highest Interest First Constraint

The process described above yields one set of equations in which the payments are summed by year and another set of equations in which the payments are summed by investment. Taken together, however, these two sets of equations have no unique solution. RA 6120.2 suggests an approach to a unique solution with the requirement that “[t]o the extent possible, while still complying with the repayment periods established for each increment of investment and unless otherwise indicated by legislation, amortization of the investment will be accompanied by application to the highest interest-bearing investment first.”

A new equation can be obtained for each year by adding together equation 2 for that year and all earlier years. This equation sums all amortization payments made on any investment that comes due in those years. This equation can be simplified by substituting the principal of each such investment for the sum of the amortization payments on that investment as given by equation 3. The resulting equation (equation 4 below) indicates that for any year the sum of amortization payments on obligations that are not due by that year cannot exceed the sum of the revenues available for interest and amortization less the accumulated interest expense and the accumulated principal of all investments that are due in, or prior to, that year.

$$(4) \qquad \sum_{i=1}^{k} \text{revenues available for interest and amortization}_i$$

$$-\sum_{i=1}^{k} \text{interest expense}_i - \sum_{\text{due}} \text{principal}_j = \sum_{\substack{\text{not}\\ \text{due}}} \sum_{i=1}^{k} \text{payment}_{ij}, \qquad k=1,2,...,n.$$

The term "due" refers to Federal obligations due to be repaid in or prior to the year k, and "not due" refers to Federal obligations not due to be repaid by the year k.

For each year in the repayment study, the right side of equation 4 represents the amount of the accumulated amortization payments on Federal obligations that are not due. The left side of the equation represents the accumulated revenues available for making these payments on the Federal obligations. These amortization payments will first be made on the highest interest bearing Federal obligations in compliance with RA 6120.2. If for some future year this amount is evaluated as being zero or negative, then this equation implies that amortization payments can be made only on highest interest bearing Federal obligations that come due on or before that year.

1.6. Iteration Towards A Solution

Equations 2 through 4 do not permit a direct solution. Although the revenues and the Federal obligation that are due are known for all years, an amortization payment made in the current year will affect interest expense in future years. That is, interest expense will no longer have to be paid on the portion of the Federal obligations that has been amortized. This problem is solved using an iterative approach.

The program initially assumes no future interest expense in evaluating the left side of the fourth set of equations. Consequently, the net revenues available for payments on Federal obligations that are not due, but bear the highest interest rates, will be excessive. As payments are determined for each successive year, and the interest expense of a given year is calculated, they are used in the fourth set of equations for all later years. The fourth set of equations is thus modified, and the revenues available for payments on "not due" highest interest rate bearing Federal obligations are reduced. Therefore, the amortization of a Federal obligation on its due date, in order to satisfy equation 3, may violate equation 2. Equation 2 may be violated when a negative balance occurs. A negative balance will result when revenues available for interest and amortization are less than interest expense plus any amortization payments that are due. As a result, a second iteration is necessary.

In the second iteration, the interest expense developed in the first iteration is used in the fourth set of equations for future years. Since amortization payments on "not due" highest interest rate bearing Federal obligations were excessive in the first iteration, the interest expense developed in the first iteration will be less than the true interest expense. These estimates, however, are more accurate than an estimate of zero interest expense and, as a result, the negative balances will be reduced.

If revenues are sufficient to recover a given set of annual expenses and to repay with interest BPA's long-term Federal obligations, then the interest expenses of successive iterations will converge and the negative balances will be reduced to zero and thus yield a solution. Under these conditions all four equations will be satisfied.

If revenues are insufficient, then compliance with the fourth set of equations will force amortization payments on the highest interest obligations to be delayed. This will cause an increase in interest expense, leaving less revenue available to amortize high interest obligations. The interest expense from successive iterations will diverge, and the negative balances will start increasing. Under these conditions no solution is possible given available revenues.

BPA does not deliberately plan to defer annual expenses in the future. Therefore, if revenues were insufficient to cover annual expenses for any year of the repayment period, the program decides that no solution is possible at that revenue level.

2. DETERMINING A SUFFICIENT REVENUE LEVEL

As noted above, the repayment program is also used to determine a minimum revenue level sufficient to meet a given set of repayment obligations.

A set of trial revenues can be obtained by multiplying a set of given revenues by a factor. A factor is an assigned real number. If the set of trial revenues obtained with a factor is found to be insufficient, then all lower factors are known to produce insufficient revenues. If some other factor is found to produce sufficient revenues, then all higher factors are known to produce sufficient revenues. Therefore, only intermediate factors need to be tested.

Testing any intermediate factor establishes one of two propositions: (1) that either it and all lower intermediate factors are excluded; or (2) that it and all higher intermediate factors are included. In this manner, the set of intermediate factors is reduced. Through this repeated testing (referred to as the binary search technique), the set of intermediate factors is reduced to a size determined by a preset tolerance limit (the tolerance level of the current study is set at .005 percent of the given revenues).

The lowest factor that is determined to produce sufficient revenues in accordance with this testing procedure will produce the <u>minimum</u> revenue level, within the accuracy of the program, that meets <u>all</u> repayment obligations with interest subject to the conditions specified in RA 6120.2 and relevant legislation.

3. TREATMENT OF BONDS ISSUED TO U.S. TREASURY

BPA's current long-term bonds issued to the U.S. Treasury consist of term bonds and callable bonds. The term bonds cannot be prepaid, so their amortization and the revenues required therefore are excluded from the above calculations. The remaining bonds are callable bonds and have provisions that allow for early redemption before the maturity date—five years after the date of the issuance on some older bonds and longer periods on some of the more recently issued bonds. In addition, a premium must be paid if a bond is repaid before its due date. The premium that must be paid decreases with the age of the bond. This premium affects the repayment process in two ways.

First, such premiums must be included with the payments of equation 2 and consequently affect the fourth set of equations. The premium that is paid on any Federal bond is considered to be due when the Federal bond is due. The premiums of one iteration are accumulated by due year and included in the fourth set of equations for the following iteration. When each premium is paid in the following iteration, it is used to modify the fourth set of equations and is also accumulated in case another iteration is necessary.

Second, the decrease in the premium that must be paid also affects the highest interest selection process. This effect is equivalent, in total, to a fixed premium and a reduced interest rate. This reduced effective interest rate enters into the comparison with other Federal investments and obligations to determine which should be repaid first.

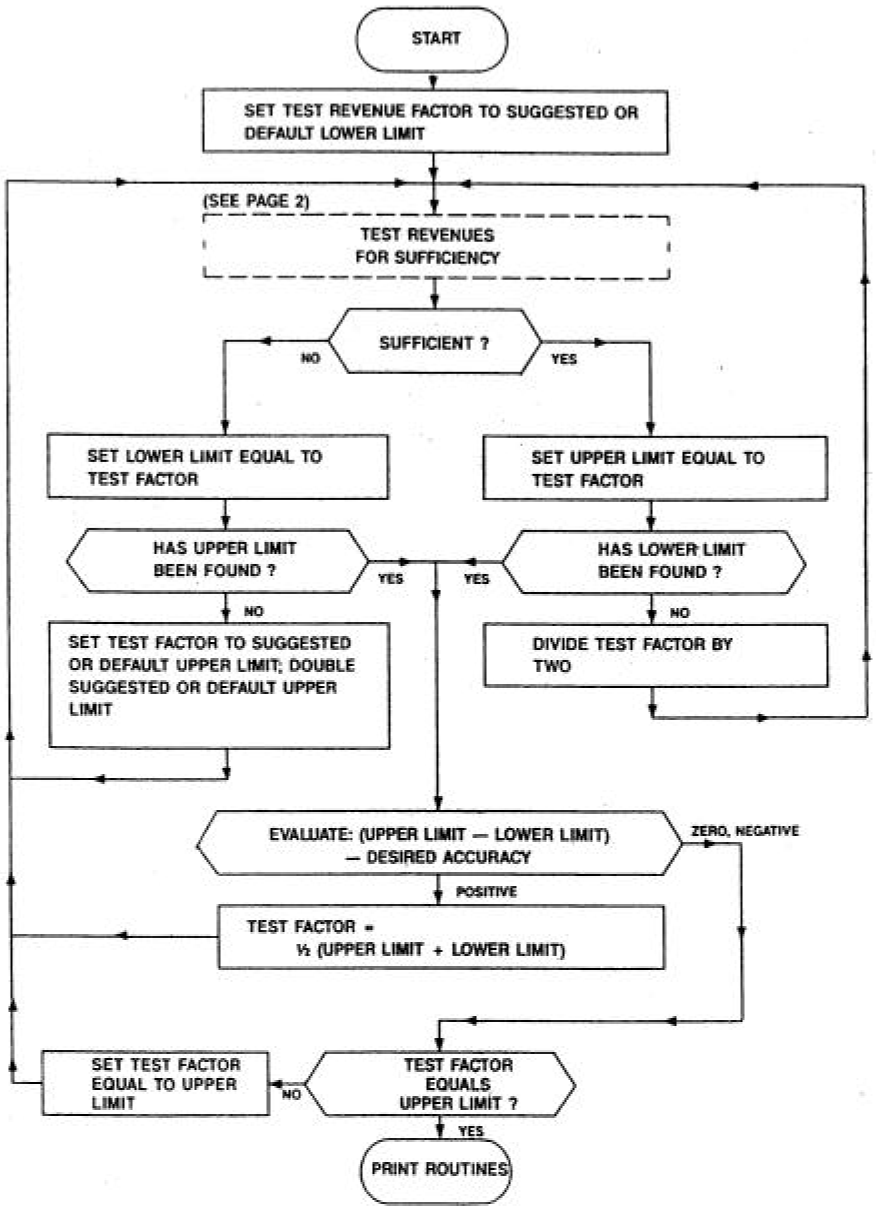
4. INTEREST INCOME

BPA is authorized by applicable legislation and RA 6120.2 to calculate interest income as a credit to interest expense. An interest income credit is computed within the repayment program based on the average cash balance of funds required to be collected for return to the U.S. Treasury in that year. The program assumes that the cash accumulates at a uniform rate throughout the year, except for interest paid on bonds issued to the U.S. Treasury at mid-year. At the end of the year the cash balance together with the interest credit earned thereon is used for payment of interest expense, amortization of the Federal investment and payment of bond premiums.

5. FLOW CHARTS

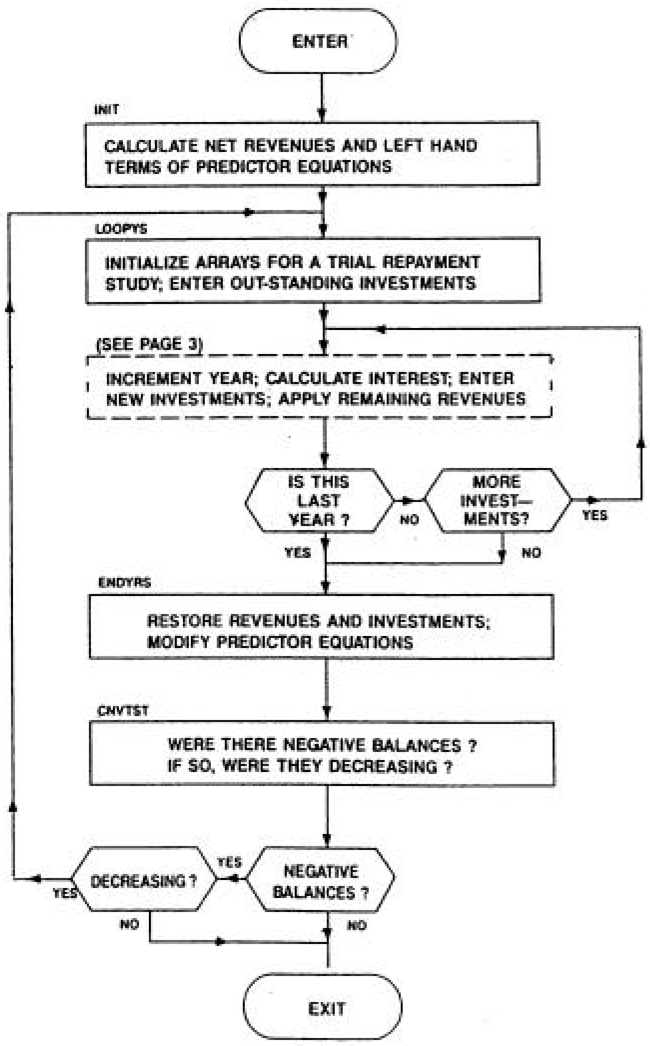
The following three pages contain flow charts associated with the repayment study program. The first chart shows the binary search process. The second chart shows the test for sufficiency. The third chart shows the application of revenues. See Volume 2, Chapter 11 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02B.

REPAYMENT PROGRAM
(BINARY SEARCH)

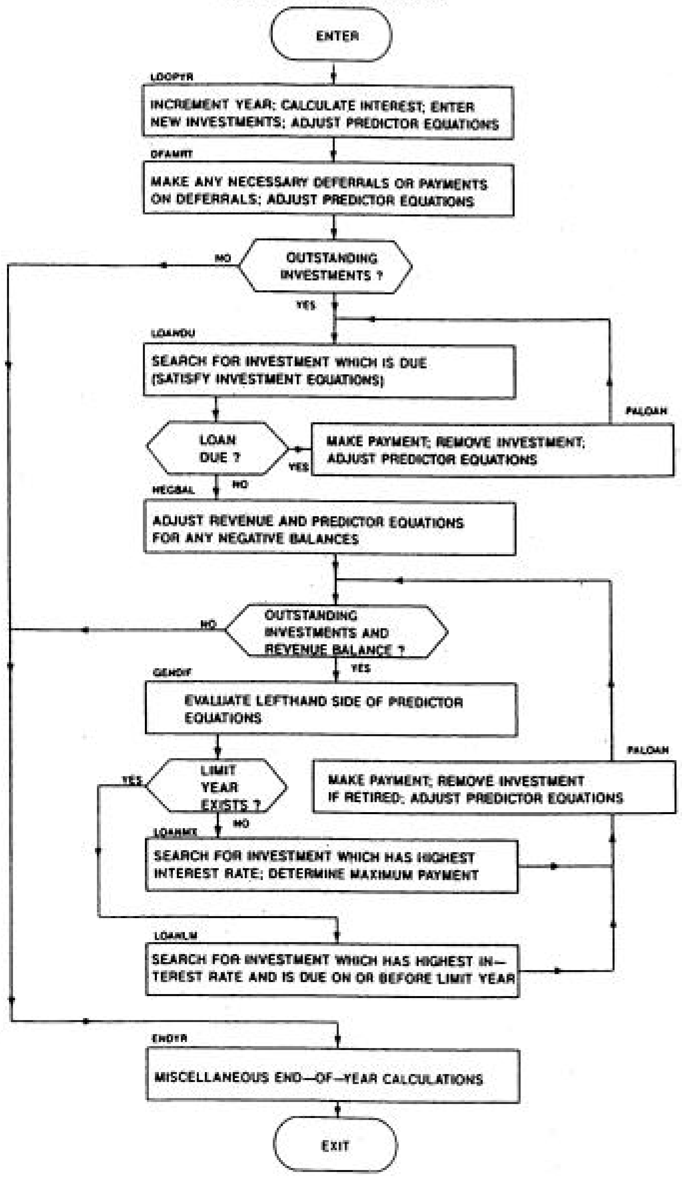


Page 1

REPAYMENT PROGRAM
(TEST FOR SUFFICIENCY)



REPAYMENT PROGRAM
APPLICATION OF REVENUES



Page 3

6. DESCRIPTION OF REPAYMENT PROGRAM TABLES

Tables 11 through 15, A through G, show the results from the Generation repayment studies for FY 2002 through 2006, respectively, using revenues from current rates. Table 16 provides the application of amortization through the repayment period for generation based upon the revenues forecast using current rates.

Tables 11A-15A display the repayment program results for generation for FY 2002 through 2006. Column A shows the applicable fiscal year. Column B shows the total investment costs of the generating projects through the cost evaluation period. *See* Volume 1, Chapter 4 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A. In Column C, forecasted replacements required to maintain the system are displayed through the repayment period. *See* Volume 1, Chapter 11 of Documentation for Revenue Requirement Study, WP-02-E-BPA-02A. Column D shows the cumulative dollar amount of the generation investment placed in service. This is comprised of historical plant-in-service, planned replacements and additions to plant through the cost evaluation period, and replacements from the end of the cost evaluation period to the end of the repayment study period. For these studies all additional plant is assumed to be financed either by appropriations or bonds.

In Column E scheduled amortization payments for generation are displayed for each year of the repayment period. Discretionary amortization (Column F) shows generation amortization payments made after the "critical year" but before the due dates of each particular project. (The critical year is defined as the last year of the repayment period during which the optimization of interest and amortization requires that the annual costs, interest, and amortization equal the minimum revenue level; this is made manifest by amortization payments approaching zero or retiring only obligations which could not be prepaid and are due.) Unamortized generation obligations, shown in column G, are determined by taking the previous year's unamortized amount, adding any replacements, subtracting amortization and subtracting discretionary amortization. Columns H, I, and J show a similar calculation of predetermined amortization payments and the unamortized amount of irrigation assistance for each year of the repayment period. Irrigation assistance is assigned 100 percent to generation.

Tables 11B-15B display planned principal payments by fiscal year for Federal generation obligations. Shown on these tables are the principal payments associated with the appropriations of the COE and Reclamation, and BPA bonds.

Tables 11C-15C show the component of the capitalized contractual obligations associated with payment of principal. Included is the stream of payments associated with a long-term, relatively fixed, energy resource acquisition contract that will not be capitalized. The capitalized contractual obligations are 100 percent generation related.

Tables 11D-15D show the planned interest payments by fiscal year for Federal generation obligations. Shown on these tables are the interest payments associated with the appropriations of the COE and Reclamation, and BPA bonds.

Using the same format as Tables 11C-15C, Tables 11E-15E detail the component of capitalized contractual obligations associated with the payment of interest expense on these bonds.

Tables 11F-15F provide a summary of all principal and interest payments associated with generation obligations. Columns B and C represent the principal portion of the conservation, and generation and capitalized contractual obligations. Column D is the total principal payment. Columns, E and F represent the interest portion of the conservation, generation and capitalized contractual obligations. Column G is the total interest payment.

Tables 11G-15G compare the schedule of unamortized Federal generation obligations resulting from the generation repayment studies to those obligations that are due and must be paid for each year of the repayment period. Column B shows unamortized obligations and is identical to the data shown in Column G of Tables 11A-15A. Column C shows obligations that are due for each year. It should be noted that obligations are always less than the term schedule, indicating that planned repayments are in excess of repayment obligations, thereby satisfying repayment requirements. (The total of Unamortized Investment need not be zero at the end of the repayment period because of the replacements occurring subsequent to the cost evaluation period.)

Table 16 lists by year through the 50-year repayment period the application of the generation amortization payments, consistent with the revised repayment studies, by project. The projected annual amortization payments on the generation obligations are identified by the project name, in-service date, due date, and interest rate. The amount of the obligation is shown as both the original gross amount due and the net amount after all prior amortization payments.

TABLE 10

APPLICATION OF AMORTIZATION - GENERATION
REPAYMENT STUDY FOR INITIAL PROPOSAL 1999
FY2002 - 2006
(000s)

Maturing/Due		
Bonds		
	2002	66,000
	2003	5,622
	2004	7,400
	2005	0
	2006	0
		79,022
Appropriations		
	2002	0
	2003	20,440
	2004	56,464
	2005	103,173
	2006	53,200
		233,277
Irrigation Assistance		
	2004	739
		739
	TOTAL	**313,038**

Scheduled But Not Yet Due		
Bonds		
	2002	0
	2003	0
	2004	27,182
	2005	28,781
	2006	1
		55,964
Appropriations		
	2002	41,208
	2003	46,420
	2004	0
	2005	16,365
	2006	73,041
		177,034
	TOTAL	**232,998**

Total by Year		
Bonds		
	2002	66,000
	2003	5,622
	2004	34,582
	2005	28,781
	2006	1
		134,986
Appropriations		
	2002	41,208
	2003	66,860
	2004	56,464
	2005	119,538
	2006	126,241
		410,311
Irrigation Assistance		
	2004	739
		739
Total		
	2002	107,208
	2003	72,482
	2004	91,785
	2005	148,319
	2006	126,242
		546,036

FY 2002

FEDERAL COLUMBIA RIVER POWER SYSTEM

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

TABLE 11A

A	B	C	D	E	F	G	H	I	J
FISCAL	INVESTMENT PLACED IN SERVICE						IRRIGATION ASSISTANCE		
YEAR ENDING SEPT 30	INITIAL 1/ PROJECT THRU 9-30 +	REPLACE-MENTS THRU 9-30 =	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION 9-30 -	DISCRE-TIONARY AMORTIZATION =	UNAMOR-TIZED INVESTMENT	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION =	UNAMORTIZED AMOUNT
CUMULATIVE 1998	5,347,000	179,664	5,526,664	1,703,513		3,823,151	774,206		774,206
1999	255,994		5,782,658	27,655		4,051,490	774,206		774,206
2000	177,315		5,959,973	50,019		4,178,786	774,206		774,206
2001	486,719		6,446,692	53,389		4,612,116	774,206	16,560	757,646
2002	261,737		6,708,429	107,208		4,766,645	774,206		757,646
2003			6,708,429	66,075		4,700,570	774,206		757,646
2004			6,708,429	81,205		4,619,365	774,206	739	756,907
2005			6,708,429	142,627		4,476,738	774,206		756,907
2006			6,708,429	118,701		4,358,037	774,206		756,907
2007			6,708,429	106,728		4,251,309	774,206	2,930	753,977
2008			6,708,429	104,301		4,147,008	774,206	20	753,957
2009			6,708,429	118,162	2,110	4,026,736	774,206	7,709	746,248
2010			6,708,429	62,753	71,821	3,892,162	781,148		753,190
2011		253,719	6,962,148	43,332	73,797	4,028,515	787,714		759,756
2012		36,130	6,998,278	55,847	41,191	3,967,607	791,190	811	762,421
2013		170,371	7,168,649	152,800	147,432	3,837,746	810,983	49,796	732,418
2014		69,173	7,237,822	77,000	242,938	3,586,981	848,513	48,554	721,394
2015		189,697	7,427,519	147,000	186,705	3,442,973	853,620	54,101	672,400
2016		123,371	7,550,890	92,593	256,364	3,217,387	859,014	64,264	613,530
2017		141,541	7,692,431	88,572	357,535	2,912,821	894,267	62,246	586,537
2018		338,485	8,030,916	54,844	612,699	2,583,763	945,454	25,460	612,264
2019		17,939	8,048,855	6,983	447,338	2,147,381	956,356	67,001	556,165
2020		26,290	8,075,145	1,000	507,294	1,665,377	977,614	36,743	540,680
2021		144,610	8,219,755	69,828	498,253	1,241,906	1,016,821	16,826	563,061
2022		208,162	8,427,917	27,396	565,319	857,353	1,055,870	15,831	586,279
2023		89,275	8,517,192	1,555	624,533	320,540	1,084,950	9,663	605,696
2024		2,871	8,520,063	70	323,341		1,126,756	345,100	302,402
2025		197,923	8,717,986		197,923		1,146,793		322,439
2026		80,725	8,798,711		80,725		1,180,021		355,667
2027		185,983	8,984,694		185,983		1,212,249		387,895
2028		200,689	9,185,383		200,689		1,245,635		421,281
2029		164,432	9,349,815		164,432		1,290,432		466,078
2030		34,177	9,383,992		34,177		1,320,395		496,041
2031		135,453	9,519,445		135,453		1,350,358		526,004
2032		126,534	9,645,979		126,534		1,395,155		570,801
2033		56,523	9,702,502		56,523		1,435,579		611,225
2034		38,147	9,740,649		38,147		1,476,003		651,649
2035		170,807	9,911,456		170,807		1,505,210		680,856
2036		69,159	9,980,615		69,159		1,533,759		709,405
2037		108,915	10,089,530		108,915		1,562,467		738,113
2038		12,169	10,101,699		12,169		1,591,777		767,423
2039		141,511	10,243,210		141,511		1,621,088		796,734
2040		576	10,243,786		576		1,654,923		830,569
2041		106,565	10,350,351		106,565		1,688,759		864,405
2042		52,748	10,403,099		52,748		1,723,453		899,099
2043		49,316	10,452,415		49,316		1,758,148		933,794
2044		61,923	10,514,338		61,923		1,791,089		966,735
2045		107,936	10,622,274		107,936		1,824,030		999,676
2046		252,730	10,875,004		252,730		1,857,129		1,032,775
2047		219,722	11,094,726		219,722		1,896,854		1,072,500
2048		178,170	11,272,896		178,170		1,936,737		1,112,383
2049		52,436	11,325,332		52,436		1,976,620		1,152,266
TOTALS	6,528,765	4,796,567		3,561,156	7,763,939			824,354	

1/ GROSS INITIAL PROJECT INVESTMENT, RETIREMENTS INCLUDED

2B

FY 2002

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A FISCAL YEAR ENDING SEPT 30	B BONNEVILLE POWER ADMINISTRATION BONDS CONS & GEN	C CORPS OF ENGINEERS APPROPRIATIONS GEN 1 /	D BUREAU OF RECLAMATION APPROPRIATIONS GEN	E IRRIGATION AMORTIZATION
2002	66,000	41,208	0	0
2003	5,622	43,091	17,362	0
2004	24,741	56,464	0	739
2005	15,531	125,653	1,443	0
2006	0	118,694	7	0
2007	45,000	61,499	229	2,930
2008	104,301	0	0	20
2009	79,810	40,415	47	7,709
2010	94,721	39,745	108	0
2011	92,660	24,541	165	0
2012	0	96,931	107	811
2013	152,800	147,432	0	49,796
2014	77,000	242,071	867	48,554
2015	147,000	142,580	44,125	54,101
2016	27,000	247,194	74,763	64,264
2017	74,732	280,389	90,986	62,246
2018	0	479,113	188,430	25,460
2019	6,000	368,691	79,630	67,001
2020	177,655	274,295	56,344	36,743
2021		314,924	253,157	16,826
2022		546,535	46,180	15,831
2023		502,949	123,139	9,663
2024		323,335	76	345,100
2025		197,923	0	
2026		80,179	546	
2027		106,073	79,910	
2028		20,708	179,981	
2029		164,432	0	
2030		34,177	0	
2031		134,470	983	
2032		123,020	3,514	
2033		49,467	7,056	
2034		38,147	0	
2035		170,807	0	
2036		68,529	630	
2037		50,266	58,649	
2038		2,909	9,260	
2039		141,511	0	
2040		576	0	
2041		106,565	0	
2042		50,752	1,996	
2043		41,515	7,801	
2044		61,923	0	
2045		107,936	0	
2046		251,797	933	
2047		20,542	199,180	
2048		122,219	55,951	
2049		52,436	0	
2050		74,019	0	
2051		141,008	0	
2052		100,182	69,360	
TOTALS	1,190,573	7,031,837	1,652,915	807,794

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1 / NET OF INTEREST INCOME AND AFUDC

TABLE 11B

2C

FY 2002

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

PRINCIPAL PAYMENTS

A	B	C	D	E
	PRINCIPAL COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2002	267,522	6,581		10,395
2003	306,329	6,967		10,948
2004	297,116	7,380		11,547
2005	271,125	7,819		12,204
2006	303,909	8,279		12,903
2007	334,063	8,466		13,661
2008	362,107	9,234		14,460
2009	373,083	9,831		15,328
2010	390,978			15,801
2011	447,733			16,741
2012	518,636			17,772
2013	256,168			18,888
2014	274,401			16,087
2015	307,002			13,628
2016	315,952			12,358
2017	282,241			13,006
2018	131,337			13,681
2019	28,138			14,390
2020	30,133			15,149
2021	32,270			15,943
2022	34,557			13,856
2023	37,008			14,970
2024	39,631			15,789
2025	42,441			1,529
2026	45,450			1,000
2027	48,673			1,000
2028	52,124			1,000
2029	55,819			1,000
2030	59,777			
2031	64,015			
2032	68,554			
2033	73,414			
2034	78,619			
2035	84,193			
2036	90,163			
2037	96,555			
2038	103,401			
2039	110,732			
2040	118,583			
2041	126,990			
2042	135,994			
2043	145,636			
2044	155,962			
2045	167,019			
2046	178,861			
2047	191,542			
2048	205,122			
2049	219,666			
2050	235,240			
2051	251,918			
TOTALS	8,847,901	64,557		335,034

TABLE 11C

2D

FY 2002

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

A	B	C	D
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS 1/ CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 2/	BUREAU OF RECLAMATION APPROPRIATIONS GEN
2002	64,601	212,019	39,534
2003	64,808	213,141	39,589
2004	65,211	210,021	38,408
2005	61,286	206,145	38,408
2006	60,280	197,409	38,312
2007	61,122	189,111	38,312
2008	58,385	184,818	38,295
2009	52,247	184,818	38,295
2010	50,293	181,965	38,292
2011	43,141	186,758	38,285
2012	33,554	193,674	38,274
2013	24,752	191,248	40,041
2014	15,068	186,149	41,815
2015	9,475	176,546	41,752
2016	-2,037	175,698	38,601
2017	-6,707	165,400	34,764
2018	-17,874	152,554	35,944
2019	-10,602	123,721	28,658
2020	-3,623	98,711	22,969
2021	-24,154	86,284	18,996
2022	-24,136	76,254	4,871
2023	-24,128	48,129	5,560
2024	-24,616	18,340	5
2025	-24,648	5,957	0
2026	-24,668	2,341	17
2027	-24,668	3,218	2,460
2028	-24,668	637	5,546
2029	-24,668	5,005	0
2030	-24,705	1,031	0
2031	-24,705	3,977	30
2032	-24,705	3,668	108
2033	-24,705	1,518	218
2034	-24,705	1,159	0
2035	-24,705	5,170	0
2036	-24,705	1,988	20
2037	-24,705	1,518	1,814
2038	-24,705	88	282
2039	-24,705	4,252	0
2040	-24,705	18	0
2041	-24,705	3,163	0
2042	-24,705	1,513	61
2043	-24,705	1,272	241
2044	-24,705	1,864	0
2045	-24,705	3,234	0
2046	-24,705	7,535	29
2047	-24,705	605	6,140
2048	-24,705	3,770	1,730
2049	-24,705	1,600	0
2050	-24,705	2,260	0
2051	-24,705	4,178	0
2052	-24,705	3,054	2,139
TOTALS	-165,189	3,734,506	758,815

LEGEND

GEN = GENERATION
CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC
2/ INCLUDES PAYMENTS FOR LOWER SNAKE FISH & WILDLIFE

TABLE 11D

2E

FY 2002

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

INTEREST PAYMENTS

	B	C	D	E
	INTEREST COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2002	261,342	3,367		14,826
2003	259,501	5,986		14,271
2004	260,363	2,584		13,472
2005	234,090	2,171		13,028
2006	235,895	1,730		12,334
2007	223,396	1,247		11,579
2008	207,504	725		10,767
2009	189,485	-10,330		9,878
2010	169,758			8,955
2011	132,598			7,993
2012	81,685			9,172
2013	105,470			4,021
2014	81,240			7,363
2015	47,941			6,466
2016	31,056			5,767
2017	-11,570			5,128
2018	-22,482			4,452
2019	281,252			3,736
2020	279,257			2,982
2021	277,121			-752
2022	274,833			1,834
2023	272,383			943
2024	269,759			-13,341
2025	266,949			27
2026	263,940			
2027	260,718			
2028	257,267			
2029	253,571			
2030	249,614			
2031	245,375			
2032	240,837			
2033	235,976			
2034	230,771			
2035	225,197			
2036	219,228			
2037	212,835			
2038	205,990			
2039	198,658			
2040	190,808			
2041	182,400			
2042	173,396			
2043	163,754			
2044	153,429			
2045	142,371			
2046	130,529			
2047	117,848			
2048	104,268			
2049	89,725			
2050	74,150			
2051	57,472			
TOTALS	9,288,954	7,480		154,892

TABLE 11E

2F

FY 2002

FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000

SUMMARY TOTALS

TABLE 11F

A	B	C	D	E	F	G
FISCAL YEAR ENDING SEPT 30	PRINCIPAL 1/			INTEREST		
	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT
2002	107,208	284,498	391,706	316,154	279,535	595,689
2003	66,075	324,244	390,319	317,538	279,757	597,295
2004	81,944	316,043	397,987	313,640	276,419	590,059
2005	142,627	291,148	433,775	305,839	249,288	555,127
2006	118,701	325,091	443,792	296,001	249,959	545,960
2007	109,658	356,190	465,848	288,545	236,222	524,767
2008	104,321	385,801	490,122	281,498	218,995	500,493
2009	127,981	398,242	526,223	275,360	189,033	464,393
2010	134,574	406,779	541,353	270,550	178,712	449,262
2011	117,366	464,474	581,840	268,184	140,591	408,775
2012	97,849	536,408	634,257	265,502	90,856	356,358
2013	350,028	275,056	625,084	256,041	109,490	365,531
2014	368,492	290,488	658,980	243,032	88,603	331,635
2015	387,806	320,630	708,436	227,773	54,407	282,180
2016	413,221	328,310	741,531	212,262	36,822	249,084
2017	508,353	295,247	803,600	193,457	-6,442	187,015
2018	693,003	145,018	838,021	170,624	-18,030	152,594
2019	521,322	42,528	563,850	141,777	284,988	426,765
2020	545,037	45,282	590,319	118,057	282,239	400,296
2021	584,907	48,213	633,120	81,126	276,369	357,495
2022	608,546	48,413	656,959	56,989	276,667	333,656
2023	635,751	51,978	687,729	29,561	273,326	302,887
2024	668,511	55,420	723,931	-6,271	256,418	250,147
2025	197,923	43,970	241,893	-18,691	266,976	248,285
2026	80,725	46,450	127,175	-22,310	263,940	241,630
2027	185,983	49,673	235,656	-18,990	260,718	241,728
2028	200,689	53,124	253,813	-18,485	257,267	238,782
2029	164,432	56,819	221,251	-19,663	253,571	233,908
2030	34,177	59,777	93,954	-23,674	249,614	225,940
2031	135,453	64,015	199,468	-20,698	245,375	224,677
2032	126,534	68,554	195,088	-20,929	240,837	219,908
2033	56,523	73,414	129,937	-22,969	235,976	213,007
2034	38,147	78,619	116,766	-23,546	230,771	207,225
2035	170,807	84,193	255,000	-19,535	225,197	205,662
2036	69,159	90,163	159,322	-22,697	219,228	196,531
2037	108,915	96,555	205,470	-21,373	212,835	191,462
2038	12,169	103,401	115,570	-24,335	205,990	181,655
2039	141,511	110,732	252,243	-20,453	198,658	178,205
2040	576	118,583	119,159	-24,687	190,808	166,121
2041	106,565	126,990	233,555	-21,542	182,400	160,858
2042	52,748	135,994	188,742	-23,131	173,396	150,265
2043	49,316	145,636	194,952	-23,192	163,754	140,562
2044	61,923	155,962	217,885	-22,841	153,429	130,588
2045	107,936	167,019	274,955	-21,471	142,371	120,900
2046	252,730	178,861	431,591	-17,141	130,529	113,388
2047	219,722	191,542	411,264	-17,960	117,848	99,888
2048	178,170	205,122	383,292	-19,205	104,268	85,063
2049	52,436	219,666	272,102	-23,105	89,725	66,620
2050	74,019	235,240	309,259	-22,445	74,150	51,705
2051	141,008	251,918	392,926	-20,527	57,472	36,945
TOTALS	10,513,577	9,247,492	19,761,069	4,347,644	9,451,326	13,798,970

LEGEND

CCO = CAPITALIZED CONTRACT OBLIGATIONS

CONS = CONSERVATION

GEN = GENERATION

1/ INCLUDES PAYMENTS FOR THE IRRIGATION ASSISTANCE

2G

FY 2002

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

A	B	C
FISCAL YEAR ENDING SEPT 30	UNAMORTIZED INVESTMENT	TERM SCHEDULE
CUMULATIVE		
2001	4,612,116	5,596,616
2002	4,766,645	5,792,353
2003	4,700,570	5,555,947
2004	4,619,365	5,416,835
2005	4,476,738	5,269,089
2006	4,358,037	5,215,889
2007	4,251,309	5,114,283
2008	4,147,008	4,781,108
2009	4,026,736	4,662,946
2010	3,892,162	4,600,102
2011	4,028,515	4,798,593
2012	3,967,607	4,706,186
2013	3,837,746	4,723,757
2014	3,586,981	4,703,356
2015	3,442,973	4,746,053
2016	3,217,387	4,774,127
2017	2,912,821	4,812,475
2018	2,583,763	5,050,911
2019	2,147,381	4,937,027
2020	1,665,377	4,853,460
2021	1,241,906	4,843,394
2022	857,353	4,956,431
2023	320,540	4,871,144
2024		4,864,466
2025		4,707,577
2026		4,479,460
2027		4,509,397
2028		4,491,165
2029		4,336,350
2030		4,342,946
2031		4,302,929
2032		4,139,196
2033		3,869,530
2034		3,889,346
2035		3,894,792
2036		3,895,008
2037		3,908,007
2038		3,891,672
2039		3,947,092
2040		3,944,883
2041		3,971,319
2042		3,958,519
2043		3,836,335
2044		3,717,163
2045		3,558,014
2046		3,408,224
2047		3,398,147
2048		3,415,442
2049		3,265,177
2050		3,273,352
2051		2,898,444
2052		2,771,003

TABLE 11G

TABLE 12A

2A

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

A	B	C	D	E	F	G	H	I	J
	INVESTMENT PLACED IN SERVICE						IRRIGATION ASSISTANCE		
FISCAL YEAR ENDING SEPT 30	INITIAL 1/ PROJECT THRU 9-30	+ REPLACE-MENTS THRU 9-30	= CUMULATIVE AMOUNT IN SERVICE	- AMORTI-ZATION 9-30	- DISCRE-TIONARY AMORTIZATION	= UNAMOR-TIZED INVESTMENT	CUMULATIVE AMOUNT IN SERVICE	- AMORTI-ZATION	= UNAMORTIZED AMOUNT
CUMULATIVE									
1998	5,347,000	179,664	5,526,664	1,703,513		3,823,151	774,206		774,206
1999	255,994		5,782,658	27,655		4,051,490	774,206		774,206
2000	177,315		5,959,973	50,019		4,178,786	774,206		774,206
2001	486,719		6,446,692	53,389		4,612,116	774,206	16,560	757,646
2002	261,737		6,708,429	107,208		4,766,645	774,206		757,646
2003	207,568		6,915,997	72,482		4,901,731	774,206		757,646
2004			6,915,997	81,209		4,820,522	774,206	739	756,907
2005			6,915,997	142,621		4,677,901	774,206		756,907
2006			6,915,997	118,703		4,559,198	774,206		756,907
2007			6,915,997	106,740		4,452,458	774,206	2,922	753,985
2008			6,915,997	104,300		4,348,158	774,206	28	753,957
2009			6,915,997	118,162	2,113	4,227,883	774,206	7,709	746,248
2010			6,915,997	62,753	71,822	4,093,308	781,148		753,190
2011		260,483	7,176,480	43,569	73,829	4,236,393	787,714		759,756
2012		37,095	7,213,575	55,847	41,258	4,176,383	791,190	811	762,421
2013		174,913	7,388,488	152,907	147,385	4,051,004	810,983	49,796	732,418
2014		71,017	7,459,505	77,000	243,034	3,801,987	848,513	48,554	721,394
2015		194,752	7,654,257	147,000	186,851	3,662,888	853,620	54,101	672,400
2016		126,659	7,780,916	94,342	254,815	3,440,390	859,014	64,264	613,530
2017		145,316	7,926,232	122,595	323,618	3,139,493	894,267	62,246	586,537
2018		347,506	8,273,738	94,623	573,043	2,819,333	945,454	25,460	612,264
2019		18,417	8,292,155	6,988	445,722	2,385,040	956,356	67,001	556,165
2020		26,992	8,319,147	1,030	501,770	1,909,232	977,614	36,743	540,680
2021		148,463	8,467,610	71,689	495,431	1,490,575	1,016,821	16,826	563,061
2022		213,710	8,681,320	28,126	563,415	1,112,744	1,055,870	15,831	586,279
2023		91,652	8,772,972	1,595	622,176	580,625	1,084,950	9,663	605,696
2024		2,946	8,775,918	105	583,466		1,126,756	98,272	549,230
2025		203,199	8,979,117		203,199		1,146,793	246,828	322,439
2026		82,877	9,061,994		82,877		1,180,021		355,667
2027		190,942	9,252,936		190,942		1,212,249		387,895
2028		206,038	9,458,974		206,038		1,245,635		421,281
2029		168,814	9,627,788		168,814		1,290,432		466,078
2030		35,090	9,662,878		35,090		1,320,395		496,041
2031		139,063	9,801,941		139,063		1,350,358		526,004
2032		129,909	9,931,850		129,909		1,395,155		570,801
2033		58,032	9,989,882		58,032		1,435,579		611,225
2034		39,164	10,029,046		39,164		1,476,003		651,649
2035		175,358	10,204,404		175,358		1,505,210		680,856
2036		71,004	10,275,408		71,004		1,533,759		709,405
2037		111,819	10,387,227		111,819		1,562,467		738,113
2038		12,493	10,399,720		12,493		1,591,777		767,423
2039		145,279	10,544,999		145,279		1,621,088		796,734
2040		591	10,545,590		591		1,654,923		830,569
2041		109,408	10,654,998		109,408		1,688,759		864,405
2042		54,153	10,709,151		54,153		1,723,453		899,099
2043		50,633	10,759,784		50,633		1,758,148		933,794
2044		63,574	10,823,358		63,574		1,791,089		966,735
2045		110,813	10,934,171		110,813		1,824,030		999,676
2046		259,467	11,193,638		259,467		1,857,129		1,032,775
2047		225,579	11,419,217		225,579		1,896,854		1,072,500
2048		182,917	11,602,134		182,917		1,936,737		1,112,383
2049		53,834	11,655,968		53,834		1,976,620		1,152,266
2050		75,991	11,731,959		75,991		1,999,876		1,175,522
TOTALS	6,736,333	4,995,626		3,646,170	8,085,789			824,354	

1/ GROSS INITIAL PROJECT INVESTMENT, RETIREMENTS INCLUDED

2B

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A	B	C	D	E
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 1/	BUREAU OF RECLAMATION APPROPRIATIONS GEN	IRRIGATION AMORTIZATION
2003	5,622	49,498	17,362	0
2004	24,745	56,464	0	739
2005	15,538	125,640	1,443	0
2006	1	118,695	7	0
2007	45,000	61,511	229	2,922
2008	104,300	0	0	28
2009	79,813	40,415	47	7,709
2010	94,722	39,745	108	0
2011	92,645	24,588	165	0
2012	0	96,998	107	811
2013	152,800	147,385	107	49,796
2014	77,000	242,167	867	48,554
2015	147,000	142,726	44,125	54,101
2016	27,000	255,640	66,517	64,264
2017	74,732	287,532	83,949	62,246
2018	38,317	432,228	197,121	25,460
2019	6,000	370,783	75,927	67,001
2020	265,705	171,155	65,940	36,743
2021		564,957	2,163	16,826
2022		383,768	207,773	15,831
2023		406,673	217,098	9,663
2024		574,451	9,120	98,272
2025		203,199	0	246,828
2026		82,316	561	
2027		108,900	82,042	
2028		21,260	184,778	
2029		168,814	0	
2030		35,090	0	
2031		138,054	1,009	
2032		126,300	3,609	
2033		50,787	7,245	
2034		39,164	0	
2035		175,358	0	
2036		70,357	647	
2037		51,606	60,213	
2038		2,987	9,506	
2039		145,279	0	
2040		591	0	
2041		109,408	0	
2042		52,104	2,049	
2043		42,624	8,009	
2044		63,574	0	
2045		110,813	0	
2046		258,510	957	
2047		21,090	204,489	
2048		125,475	57,442	
2049		53,834	0	
2050		75,991	0	
2051		144,766	0	
2052		102,853	71,210	
2053		78,236	112,959	
TOTALS	1,250,940	7,252,359	1,796,900	807,794

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

TABLE 12B

2C

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

PRINCIPAL PAYMENTS

PRINCIPAL COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS

A	B	C	D	E
FISCAL YEAR ENDING SEPT	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2003	306,329	6,967		10,948
2004	297,116	7,380		11,547
2005	271,125	7,819		12,204
2006	303,909	8,279		12,903
2007	334,063	8,466		13,661
2008	362,107	9,234		14,460
2009	373,083	9,831		15,328
2010	390,978			15,801
2011	447,733			16,741
2012	518,636			17,772
2013	256,168			18,888
2014	274,401			16,087
2015	307,002			13,628
2016	315,952			12,358
2017	282,241			13,006
2018	131,337			13,681
2019	30,183			14,390
2020	32,262			15,149
2021	34,485			15,943
2022	36,861			13,856
2023	39,401			14,970
2024	42,116			15,789
2025	45,018			1,529
2026	48,119			1,000
2027	51,435			1,000
2028	54,979			1,000
2029	58,767			1,000
2030	62,816			
2031	67,144			
2032	71,770			
2033	76,715			
2034	82,001			
2035	87,650			
2036	93,689			
2037	100,145			
2038	107,045			
2039	114,420			
2040	122,304			
2041	130,730			
2042	139,738			
2043	149,366			
2044	159,657			
2045	170,657			
2046	182,415			
2047	194,984			
2048	208,418			
2049	222,778			
2050	238,128			
2051	254,535			
2052	272,072			
TOTALS	8,954,979	57,976		324,639

2D

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

A	B	C	D
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS 1/ CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 2/	BUREAU OF RECLAMATION APPROPRIATIONS GEN
2003	68,691	215,519	39,642
2004	73,530	214,312	38,515
2005	69,615	210,436	38,515
2006	68,601	201,700	38,419
2007	69,440	193,403	38,419
2008	66,701	189,109	38,402
2009	60,567	189,109	38,402
2010	58,615	186,256	38,399
2011	51,459	191,022	38,392
2012	41,870	197,905	38,381
2013	33,112	195,451	40,139
2014	23,431	190,329	41,897
2015	17,839	180,675	41,834
2016	6,329	179,771	38,683
2017	1,673	168,971	35,428
2018	-9,463	155,611	37,074
2019	-4,711	130,220	29,135
2020	6,043	105,055	23,709
2021	-24,437	98,735	19,045
2022	-24,419	73,404	20,434
2023	-24,411	56,038	11,507
2024	-24,896	32,553	533
2025	-24,929	5,928	0
2026	-24,949	2,337	17
2027	-24,949	3,203	2,447
2028	-24,949	633	5,518
2029	-24,949	4,978	0
2030	-24,985	1,027	0
2031	-24,985	3,964	30
2032	-24,985	3,656	107
2033	-24,985	1,510	217
2034	-24,985	1,151	0
2035	-24,985	5,138	0
2036	-24,985	1,987	20
2037	-24,985	1,513	1,804
2038	-24,985	87	280
2039	-24,985	4,232	0
2040	-24,985	18	0
2041	-24,985	3,156	0
2042	-24,985	1,506	61
2043	-24,985	1,266	240
2044	-24,985	1,853	0
2045	-24,985	3,213	0
2046	-24,985	7,507	29
2047	-24,985	605	6,109
2048	-24,985	3,751	1,721
2049	-24,985	1,591	0
2050	-24,985	2,248	0
2051	-24,985	4,163	0
2052	-24,985	3,039	2,127
2053	-24,985	2,246	3,365
TOTALS	-119,186	3,633,090	748,996

TABLE 12D

LEGEND

GEN = GENERATION
CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC
2/ INCLUDES PAYMENTS FOR LOWER SNAKE FISH & WILDLIFE

2E

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

INTEREST PAYMENTS

	B	C	D	E
	INTEREST COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2003	259,501	5,986		14,271
2004	260,363	2,584		13,472
2005	234,090	2,171		13,028
2006	235,895	1,730		12,334
2007	223,396	1,247		11,579
2008	207,504	725		10,767
2009	189,485	-10,330		9,878
2010	169,758			8,955
2011	132,598			7,993
2012	81,685			9,172
2013	105,470			4,021
2014	81,240			7,363
2015	47,941			6,466
2016	31,056			5,767
2017	-11,570			5,128
2018	-22,482			4,452
2019	280,672			3,736
2020	278,593			2,982
2021	276,370			-752
2022	273,994			1,834
2023	271,454			943
2024	268,739			-13,341
2025	265,838			27
2026	262,736			
2027	259,420			
2028	255,877			
2029	252,089			
2030	248,040			
2031	243,712			
2032	239,085			
2033	234,140			
2034	228,855			
2035	223,205			
2036	217,166			
2037	210,711			
2038	203,811			
2039	196,435			
2040	188,552			
2041	180,125			
2042	171,118			
2043	161,490			
2044	151,198			
2045	140,198			
2046	128,440			
2047	115,871			
2048	102,437			
2049	88,077			
2050	72,728			
2051	56,321			
2052	38,783			
TOTALS	9,012,207	4,113		140,067

TABLE 12E

2F

FY 2003

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000

SUMMARY TOTALS

A	B	C	D	E	F	G
FISCAL YEAR ENDING SEPT 30	PRINCIPAL 1/			INTEREST		
	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT
2003	72,482	324,244	396,726	323,852	279,757	603,609
2004	81,948	316,043	397,991	326,357	276,419	602,776
2005	142,621	291,148	433,769	318,566	249,288	567,854
2006	118,703	325,091	443,794	308,720	249,959	558,679
2007	109,662	356,190	465,852	301,262	236,222	537,484
2008	104,328	385,801	490,129	294,212	218,995	513,207
2009	127,984	398,242	526,226	288,078	189,033	477,111
2010	134,575	406,779	541,354	283,270	178,712	461,982
2011	117,398	464,474	581,872	280,873	140,591	421,464
2012	97,916	536,408	634,324	278,156	90,856	369,012
2013	350,088	275,056	625,144	268,702	109,490	378,192
2014	368,588	290,488	659,076	255,657	88,603	344,260
2015	387,952	320,630	708,582	240,348	54,407	294,755
2016	413,421	328,310	741,731	224,783	36,822	261,605
2017	508,459	295,247	803,706	206,072	-6,442	199,630
2018	693,126	145,018	838,144	183,222	-18,030	165,192
2019	519,711	44,573	564,284	154,644	284,408	439,052
2020	539,543	47,411	586,954	134,807	281,574	416,381
2021	583,946	50,428	634,374	93,343	275,618	368,961
2022	607,372	50,717	658,089	69,419	275,828	345,247
2023	633,434	54,371	687,805	43,134	272,397	315,531
2024	681,843	57,905	739,748	8,190	255,398	263,588
2025	450,027	46,547	496,574	-19,001	265,865	246,864
2026	82,877	49,119	131,996	-22,595	262,736	240,141
2027	190,942	52,435	243,377	-19,299	259,420	240,121
2028	206,038	55,979	262,017	-18,798	255,877	237,079
2029	168,814	59,767	228,581	-19,971	252,089	232,118
2030	35,090	62,816	97,906	-23,958	248,040	224,082
2031	139,063	67,144	206,207	-20,991	243,712	222,721
2032	129,909	71,770	201,679	-21,222	239,085	217,863
2033	58,032	76,715	134,747	-23,258	234,140	210,882
2034	39,164	82,001	121,165	-23,834	228,855	205,021
2035	175,358	87,650	263,008	-19,847	223,205	203,358
2036	71,004	93,689	164,693	-22,978	217,166	194,188
2037	111,819	100,145	211,964	-21,668	210,711	189,043
2038	12,493	107,045	119,538	-24,618	203,811	179,193
2039	145,279	114,420	259,699	-20,753	196,435	175,682
2040	591	122,304	122,895	-24,967	188,552	163,585
2041	109,408	130,730	240,138	-21,829	180,125	158,296
2042	54,153	139,738	193,891	-23,418	171,118	147,700
2043	50,633	149,366	199,999	-23,479	161,490	138,011
2044	63,574	159,657	223,231	-23,132	151,198	128,066
2045	110,813	170,657	281,470	-21,772	140,198	118,426
2046	259,467	182,415	441,882	-17,449	128,440	110,991
2047	225,579	194,984	420,563	-18,271	115,871	97,600
2048	182,917	208,418	391,335	-19,513	102,437	82,924
2049	53,834	222,778	276,612	-23,394	88,077	64,683
2050	75,991	238,128	314,119	-22,737	72,728	49,991
2051	144,766	254,535	399,301	-20,822	56,321	35,499
2052	174,063	272,072	446,135	-19,819	38,783	18,964
TOTALS	10,916,798	9,337,594	20,254,392	4,282,274	9,156,386	13,438,660

LEGEND

CCO = CAPITALIZED CONTRACT OBLIGATIONS
CONS = CONSERVATION
GEN = GENERATION

1/ INCLUDES PAYMENTS FOR THE IRRIGATION ASSISTANCE

TABLE 12F

2G

FY 2003

FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000)

A FISCAL YEAR ENDING SEPT 30	B UNAMORTIZED INVESTMENT	C TERM SCHEDULE
CUMULATIVE		
2001	4,612,116	5,596,616
2002	4,766,645	5,792,353
2003	4,901,731	5,763,515
2004	4,820,522	5,624,403
2005	4,677,901	5,476,657
2006	4,559,198	5,423,457
2007	4,452,458	5,321,851
2008	4,348,158	4,988,676
2009	4,227,883	4,870,514
2010	4,093,308	4,807,670
2011	4,236,393	5,012,925
2012	4,176,383	4,921,483
2013	4,051,004	4,943,489
2014	3,801,987	4,924,932
2015	3,662,888	4,972,684
2016	3,440,390	5,002,297
2017	3,139,493	5,044,051
2018	2,819,333	5,251,729
2019	2,385,040	5,138,318
2020	1,909,232	5,055,451
2021	1,490,575	5,047,377
2022	1,112,744	5,165,232
2023	580,625	5,082,282
2024		5,075,677
2025		4,920,989
2026		4,693,080
2027		4,726,791
2028		4,713,327
2029		4,561,287
2030		4,568,143
2031		4,528,189
2032		4,365,599
2033		4,097,106
2034		4,117,451
2035		4,124,327
2036		4,124,556
2037		4,139,834
2038		4,123,566
2039		4,180,462
2040		4,178,267
2041		4,205,642
2042		4,193,202
2043		4,071,959
2044		3,952,960
2045		3,794,253
2046		3,644,484
2047		3,638,458
2048		3,568,164
2049		3,418,184
2050		3,427,609
2051		3,052,701
2052		2,925,447
2053		2,893,028

TABLE 12G

2A

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

TABLE 13A

A	B	C	D	E	F	G	H	I	J
FISCAL	INVESTMENT PLACED IN SERVICE						IRRIGATION ASSISTANCE		
YEAR ENDING SEPT 30	INITIAL 1/ PROJECT THRU 9-30 +	REPLACE-MENTS THRU 9-30 =	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION 9-30 -	DISCRE-TIONARY AMORTIZATION =	UNAMOR-TIZED INVESTMENT	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION =	UNAMORTIZED AMOUNT
CUMULATIVE									
1998	5,347,000	179,664	5,526,664	1,703,513		3,823,151	774,206		774,206
1999	255,994		5,782,658	27,655		4,051,490	774,206		774,206
2000	177,315		5,959,973	50,019		4,178,786	774,206		774,206
2001	486,719		6,446,692	53,389		4,612,116	774,206	16,560	757,646
2002	261,737		6,708,429	107,208		4,766,645	774,206		757,646
2003	207,568		6,915,997	72,482		4,901,731	774,206		757,646
2004	345,960		7,261,957	90,694		5,156,997	774,206	739	756,907
2005			7,261,957	142,624		5,014,373	774,206		756,907
2006			7,261,957	118,697		4,895,676	774,206		756,907
2007			7,261,957	106,722		4,788,954	774,206	2,934	753,973
2008			7,261,957	104,301		4,684,653	774,206	16	753,957
2009			7,261,957	118,162	2,106	4,564,385	774,206	7,709	746,248
2010			7,261,957	62,753	71,807	4,429,825	781,148		753,190
2011		267,681	7,529,638	43,569	74,155	4,579,782	787,714		759,756
2012		38,118	7,567,756	55,847	40,806	4,521,247	791,190	811	762,421
2013		179,747	7,747,503	152,907	146,759	4,401,328	810,983	49,796	732,418
2014		72,982	7,820,485	77,107	242,062	4,155,141	848,513	48,554	721,394
2015		200,134	8,020,619	147,000	185,723	4,022,552	853,620	54,101	672,400
2016		130,160	8,150,779	96,203	251,512	3,804,997	859,014	64,264	613,530
2017		149,329	8,300,108	89,333	355,090	3,509,903	894,267	62,246	586,537
2018		357,112	8,657,220	96,181	569,184	3,201,650	945,454	25,460	612,264
2019		18,925	8,676,145	42,818	397,976	2,779,781	956,356	67,001	556,165
2020		27,737	8,703,882	1,031	485,965	2,320,522	977,614	36,743	540,680
2021		152,566	8,856,448	73,670	479,887	1,919,531	1,016,821	16,826	563,061
2022		219,615	9,076,063	28,902	548,467	1,561,777	1,055,870	15,831	586,279
2023		94,188	9,170,251	1,640	607,083	1,047,242	1,084,950	9,663	605,696
2024		3,029	9,173,280	109	644,746	405,416	1,126,756	21,072	626,430
2025		208,815	9,382,095	121,670	492,561		1,146,793	84,669	561,798
2026		85,168	9,467,263		85,168		1,180,021	239,359	355,667
2027		196,217	9,663,480		196,217		1,212,249		387,895
2028		211,731	9,875,211		211,731		1,245,635		421,281
2029		173,479	10,048,690		173,479		1,290,432		466,078
2030		36,058	10,084,748		36,058		1,320,395		496,041
2031		142,908	10,227,656		142,908		1,350,358		526,004
2032		133,499	10,361,155		133,499		1,395,155		570,801
2033		59,635	10,420,790		59,635		1,435,579		611,225
2034		40,248	10,461,038		40,248		1,476,003		651,649
2035		180,203	10,641,241		180,203		1,505,210		680,856
2036		72,965	10,714,206		72,965		1,533,759		709,405
2037		114,907	10,829,113		114,907		1,562,467		738,113
2038		12,841	10,841,954		12,841		1,591,777		767,423
2039		149,299	10,991,253		149,299		1,621,088		796,734
2040		607	10,991,860		607		1,654,923		830,569
2041		112,431	11,104,291		112,431		1,688,759		864,405
2042		55,650	11,159,941		55,650		1,723,453		899,099
2043		52,030	11,211,971		52,030		1,758,148		933,794
2044		65,332	11,277,303		65,332		1,791,089		966,735
2045		113,876	11,391,179		113,876		1,824,030		999,676
2046		266,638	11,657,817		266,638		1,857,129		1,032,775
2047		231,811	11,889,628		231,811		1,896,854		1,072,500
2048		187,976	12,077,604		187,976		1,936,737		1,112,383
2049		55,321	12,132,925		55,321		1,976,620		1,152,266
2050		78,091	12,211,016		78,091		1,999,876		1,175,522
2051		148,765	12,359,781		148,765		2,024,222		1,199,868
TOTALS	7,082,293	5,277,488		3,786,206	8,573,575			824,354	

1/ GROSS INITIAL PROJECT INVESTMENT, RETIREMENTS INCLUDED

2B

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A	B	C	D	E
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 1/	BUREAU OF RECLAMATION APPROPRIATIONS GEN	IRRIGATION AMORTIZATION
2004	34,230	56,464	0	739
2005	15,518	125,663	1,443	0
2006	0	118,690	7	0
2007	45,000	61,493	229	2,934
2008	104,301	0	0	16
2009	79,806	40,415	47	7,709
2010	94,707	39,745	108	0
2011	83,202	34,357	165	0
2012	0	96,546	107	811
2013	152,800	146,759	107	49,796
2014	77,000	241,195	974	48,554
2015	147,000	141,598	44,125	54,101
2016	27,000	250,910	69,805	64,264
2017	74,732	227,068	142,623	62,246
2018	38,317	548,588	78,460	25,460
2019	41,825	267,154	131,815	67,001
2020	328,805	98,823	59,368	36,743
2021		545,012	8,545	16,826
2022		559,477	17,892	15,831
2023		310,770	297,953	9,663
2024		514,379	130,476	21,072
2025		611,927	2,304	84,669
2026		84,591	577	239,359
2027		111,909	84,308	
2028		21,847	189,884	
2029		173,479	0	
2030		36,058	0	
2031		141,871	1,037	
2032		129,791	3,708	
2033		52,190	7,445	
2034		40,248	0	
2035		180,203	0	
2036		72,300	665	
2037		53,030	61,877	
2038		3,070	9,771	
2039		149,299	0	
2040		607	0	
2041		112,431	0	
2042		53,544	2,106	
2043		43,799	8,231	
2044		65,332	0	
2045		113,876	0	
2046		265,654	984	
2047		21,671	210,140	
2048		128,946	59,030	
2049		55,321	0	
2050		78,091	0	
2051		148,765	0	
2052		105,696	73,177	
2053		80,399	116,081	
2054		5,809	0	
TOTALS	1,344,243	7,566,860	1,815,574	807,794

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

TABLE 13B

2C

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A	B	C	D	E
	PRINCIPAL COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2004	297,116	7,380		11,547
2005	271,125	7,819		12,204
2006	303,909	8,279		12,903
2007	334,063	8,466		13,661
2008	362,107	9,234		14,460
2009	373,083	9,831		15,328
2010	390,978			15,801
2011	447,733			16,741
2012	518,636			17,772
2013	256,168			18,888
2014	274,401			16,087
2015	307,002			13,628
2016	315,952			12,358
2017	282,241			13,006
2018	131,337			13,681
2019	30,933			14,390
2020	33,067			15,149
2021	35,349			15,943
2022	37,788			13,856
2023	40,395			14,970
2024	43,182			15,789
2025	46,162			1,529
2026	49,347			1,000
2027	52,752			1,000
2028	56,392			1,000
2029	60,283			1,000
2030	64,442			
2031	68,889			
2032	73,642			
2033	78,724			
2034	84,156			
2035	89,962			
2036	96,170			
2037	102,805			
2038	109,899			
2039	117,482			
2040	125,588			
2041	134,254			
2042	143,517			
2043	153,420			
2044	164,006			
2045	175,323			
2046	187,420			
2047	200,352			
2048	214,176			
2049	228,954			
2050	244,752			
2051	261,640			
2052	279,693			
2053	298,992			
TOTALS	9,049,759	51,009		313,691

TABLE 13C

2D

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

A	B	C	D
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS 1/ CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 2/	BUREAU OF RECLAMATION APPROPRIATIONS GEN
2004	76,723	221,670	38,568
2005	74,878	225,152	38,622
2006	73,874	216,415	38,526
2007	74,714	208,117	38,526
2008	71,978	203,825	38,509
2009	65,840	203,825	38,509
2010	63,896	200,972	38,506
2011	56,205	205,932	38,499
2012	47,882	212,327	38,488
2013	39,086	210,035	40,296
2014	29,402	205,107	42,102
2015	23,809	195,724	42,032
2016	12,297	195,136	38,881
2017	7,629	184,889	35,433
2018	-3,534	176,049	33,097
2019	1,568	142,497	33,817
2020	12,765	124,774	24,394
2021	-24,955	123,032	20,151
2022	-24,937	98,687	21,163
2023	-24,929	70,720	23,713
2024	-25,417	52,934	7,911
2025	-25,449	28,663	133
2026	-25,470	2,391	17
2027	-25,470	3,286	2,515
2028	-25,470	651	5,671
2029	-25,470	5,113	0
2030	-25,506	1,052	0
2031	-25,506	4,059	31
2032	-25,506	3,747	110
2033	-25,506	1,552	222
2034	-25,506	1,182	0
2035	-25,506	5,269	0
2036	-25,506	2,033	20
2037	-25,506	1,551	1,853
2038	-25,506	89	286
2039	-25,506	4,342	0
2040	-25,506	18	0
2041	-25,506	3,233	0
2042	-25,506	1,544	62
2043	-25,506	1,302	246
2044	-25,506	1,902	0
2045	-25,506	3,292	0
2046	-25,506	7,697	30
2047	-25,506	618	6,279
2048	-25,506	3,857	1,770
2049	-25,506	1,633	0
2050	-25,506	2,309	0
2051	-25,506	4,264	0
2052	-25,506	3,121	2,185
2053	-25,506	2,304	3,456
2054	-25,506	169	0
TOTALS	-136,205	3,780,062	734,629

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

2/ INCLUDES PAYMENTS FOR LOWER SNAKE FISH & WILDLIFE

TABLE 13D

2E

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

	B	C	D	E
	INTEREST COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2004	260,363	2,584		13,472
2005	234,090	2,171		13,028
2006	235,895	1,730		12,334
2007	223,396	1,247		11,579
2008	207,504	725		10,767
2009	189,485	-10,330		9,878
2010	169,758			8,955
2011	132,598			7,993
2012	81,685			9,172
2013	105,470			4,021
2014	81,240			7,363
2015	47,941			6,466
2016	31,056			5,767
2017	-11,570			5,128
2018	-22,482			4,452
2019	288,690			3,736
2020	286,555			2,982
2021	284,274			-752
2022	281,835			1,834
2023	279,227			943
2024	276,440			-13,341
2025	273,461			27
2026	270,275			
2027	266,870			
2028	263,231			
2029	259,339			
2030	255,180			
2031	250,733			
2032	245,980			
2033	240,899			
2034	235,467			
2035	229,660			
2036	223,453			
2037	216,817			
2038	209,723			
2039	202,140			
2040	194,034			
2041	185,368			
2042	176,105			
2043	166,202			
2044	155,616			
2045	144,300			
2046	132,203			
2047	119,271			
2048	105,446			
2049	90,668			
2050	74,870			
2051	57,982			
2052	39,929			
2053	20,630			
TOTALS	8,969,305	-1,873		125,796

TABLE 13E

2F

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000

SUMMARY TOTALS

A	B	C	D	E	F	G
FISCAL	PRINCIPAL 1/			INTEREST		
YEAR ENDING SEPT 30	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT
2004	91,433	316,043	407,476	336,961	276,419	613,380
2005	142,624	291,148	433,772	338,652	249,288	587,940
2006	118,697	325,091	443,788	328,815	249,959	578,774
2007	109,656	356,190	465,846	321,357	236,222	557,579
2008	104,317	385,801	490,118	314,312	218,995	533,307
2009	127,977	398,242	526,219	308,174	189,033	497,207
2010	134,560	406,779	541,339	303,374	178,712	482,086
2011	117,724	464,474	582,198	300,636	140,591	441,227
2012	97,464	536,408	633,872	298,697	90,856	389,553
2013	349,462	275,056	624,518	289,417	109,490	398,907
2014	367,723	290,488	658,211	276,611	88,603	365,214
2015	386,824	320,630	707,454	261,565	54,407	315,972
2016	411,979	328,310	740,289	246,314	36,822	283,136
2017	506,669	295,247	801,916	227,951	-6,442	221,509
2018	690,825	145,018	835,843	205,612	-18,030	187,582
2019	507,795	45,323	553,118	177,882	292,425	470,307
2020	523,739	48,216	571,955	161,933	289,537	451,470
2021	570,383	51,292	621,675	118,228	283,522	401,750
2022	593,200	51,644	644,844	94,913	283,669	378,582
2023	618,386	55,365	673,751	69,504	280,170	349,674
2024	665,927	58,971	724,898	35,428	263,099	298,527
2025	698,900	47,691	746,591	3,347	273,488	276,835
2026	324,527	50,347	374,874	-23,062	270,275	247,213
2027	196,217	53,752	249,969	-19,669	266,870	247,201
2028	211,731	57,392	269,123	-19,148	263,231	244,083
2029	173,479	61,283	234,762	-20,357	259,339	238,982
2030	36,058	64,442	100,500	-24,454	255,180	230,726
2031	142,908	68,889	211,797	-21,416	250,733	229,317
2032	133,499	73,642	207,141	-21,649	245,980	224,331
2033	59,635	78,724	138,359	-23,732	240,899	217,167
2034	40,248	84,156	124,404	-24,324	235,467	211,143
2035	180,203	89,962	270,165	-20,237	229,660	209,423
2036	72,965	96,170	169,135	-23,453	223,453	200,000
2037	114,907	102,805	217,712	-22,102	216,817	194,715
2038	12,841	109,899	122,740	-25,131	209,723	184,592
2039	149,299	117,482	266,781	-21,164	202,140	180,976
2040	607	125,588	126,195	-25,488	194,034	168,546
2041	112,431	134,254	246,685	-22,273	185,368	163,095
2042	55,650	143,517	199,167	-23,900	176,105	152,205
2043	52,030	153,420	205,450	-23,958	166,202	142,244
2044	65,332	164,006	229,338	-23,604	155,616	132,012
2045	113,876	175,323	289,199	-22,214	144,300	122,086
2046	266,638	187,420	454,058	-17,779	132,203	114,424
2047	231,811	200,352	432,163	-18,609	119,271	100,662
2048	187,976	214,176	402,152	-19,879	105,446	85,567
2049	55,321	228,954	284,275	-23,873	90,668	66,795
2050	78,091	244,752	322,843	-23,197	74,870	51,673
2051	148,765	261,640	410,405	-21,242	57,982	36,740
2052	178,873	279,693	458,566	-20,200	39,929	19,729
2053	196,480	298,992	495,472	-19,746	20,630	884
TOTALS	11,528,662	9,414,459	20,943,121	4,403,823	9,093,228	13,497,051

LEGEND

CCO = CAPITALIZED CONTRACT OBLIGATIONS

CONS = CONSERVATION

GEN = GENERATION

1/ INCLUDES PAYMENTS FOR THE IRRIGATION ASSISTANCE

TABLE 13F

2G

FY 2004

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

A FISCAL YEAR ENDING SEPT 30	B UNAMORTIZED INVESTMENT	C TERM SCHEDULE
CUMULATIVE		
2001	4,612,116	5,596,616
2002	4,766,645	5,792,353
2003	4,901,731	5,763,515
2004	5,156,997	5,970,363
2005	5,014,373	5,822,617
2006	4,895,676	5,769,417
2007	4,788,954	5,667,811
2008	4,684,653	5,334,636
2009	4,564,385	5,216,474
2010	4,429,825	5,153,630
2011	4,579,782	5,366,083
2012	4,521,247	5,275,664
2013	4,401,328	5,302,504
2014	4,155,141	5,285,805
2015	4,022,552	5,338,939
2016	3,804,997	5,370,192
2017	3,509,903	5,415,567
2018	3,201,650	5,631,293
2019	2,779,781	5,482,560
2020	2,320,522	5,400,437
2021	1,919,531	5,394,485
2022	1,561,777	5,517,469
2023	1,047,242	5,437,010
2024	405,416	5,430,484
2025		5,278,139
2026		5,050,453
2027		5,088,180
2028		5,080,332
2029		4,930,739
2030		4,937,869
2031		4,897,981
2032		4,736,606
2033		4,469,361
2034		4,490,269
2035		4,498,667
2036		4,498,910
2037		4,516,615
2038		4,500,419
2039		4,558,888
2040		4,556,709
2041		4,585,082
2042		4,573,026
2043		4,452,785
2044		4,333,971
2045		4,175,735
2046		4,025,988
2047		4,024,275
2048		3,954,472
2049		3,741,695
2050		3,752,452
2051		3,377,544
2052		3,250,488
2053		3,219,401
2054		2,972,980

2A
FY 2005
F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000)

TABLE 14A

A	B	C	D	E	F	G	H	I	J
FISCAL	INVESTMENT PLACED IN SERVICE						IRRIGATION ASSISTANCE		
YEAR ENDING SEPT 30	INITIAL 1/ PROJECT THRU 9-30 +	REPLACE- MENTS THRU 9-30 =	CUMULATIVE AMOUNT IN SERVICE -	AMORTI- ZATION 9-30 -	DISCRE- TIONARY AMORTIZATION =	UNAMOR- TIZED INVESTMENT	CUMULATIVE AMOUNT IN SERVICE -	AMORTI- ZATION =	UNAMORTIZED AMOUNT
CUMULATIVE									
1998	5,347,000	179,664	5,526,664	1,703,513		3,823,151	774,206		774,206
1999	255,994		5,782,658	27,655		4,051,490	774,206		774,206
2000	177,315		5,959,973	50,019		4,178,786	774,206		774,206
2001	486,719		6,446,692	53,389		4,612,116	774,206	16,560	757,646
2002	261,737		6,708,429	107,208		4,766,645	774,206		757,646
2003	207,568		6,915,997	72,482		4,901,731	774,206		757,646
2004	333,432		7,249,429	91,046		5,144,117	774,206	739	756,907
2005	219,995		7,469,424	148,790		5,215,322	774,206		756,907
2006			7,469,424	118,687		5,096,635	774,206		756,907
2007			7,469,424	106,695		4,989,940	774,206	2,948	753,959
2008			7,469,424	104,301		4,885,639	774,206	2	753,957
2009			7,469,424	118,162	2,093	4,765,384	774,206	7,709	746,248
2010			7,469,424	62,753	71,786	4,630,845	781,148		753,190
2011		218,159	7,687,583	43,569	75,973	4,729,462	787,714		759,756
2012		31,067	7,718,650	55,847	44,058	4,660,624	791,190	811	762,421
2013		146,493	7,865,143	152,907	151,462	4,502,748	810,983	49,796	732,418
2014		59,479	7,924,622	77,107	248,510	4,236,610	848,513	48,554	721,394
2015		163,109	8,087,731	147,107	194,030	4,058,582	853,620	54,101	672,400
2016		106,079	8,193,810	83,400	275,153	3,806,108	859,014	64,264	613,530
2017		121,704	8,315,514	86,632	371,121	3,470,059	894,267	62,246	586,537
2018		291,043	8,606,557	85,474	597,031	3,078,597	945,454	25,460	612,264
2019		15,425	8,621,982	42,783	410,618	2,640,621	956,356	67,001	556,165
2020		22,606	8,644,588	35,013	462,837	2,165,377	977,614	36,743	540,680
2021		124,341	8,768,929	60,041	508,653	1,721,024	1,016,821	16,826	563,061
2022		178,987	8,947,916	23,556	571,865	1,304,590	1,055,870	15,831	586,279
2023		76,763	9,024,679	1,337	628,142	751,874	1,084,950	9,663	605,696
2024		2,469	9,027,148	89	667,237	87,017	1,126,756	21,072	626,430
2025		170,182	9,197,330		257,199		1,146,793	324,028	322,439
2026		69,411	9,266,741		69,411		1,180,021		355,667
2027		159,917	9,426,658		159,917		1,212,249		387,895
2028		172,560	9,599,218		172,560		1,245,635		421,281
2029		141,385	9,740,603		141,385		1,290,432		466,078
2030		29,387	9,769,990		29,387		1,320,395		496,041
2031		116,469	9,886,459		116,469		1,350,358		526,004
2032		108,800	9,995,259		108,800		1,395,155		570,801
2033		48,603	10,043,862		48,603		1,435,579		611,225
2034		32,801	10,076,663		32,801		1,476,003		651,649
2035		146,866	10,223,529		146,866		1,505,210		680,856
2036		59,466	10,282,995		59,466		1,533,759		709,405
2037		93,650	10,376,645		93,650		1,562,467		738,113
2038		10,464	10,387,109		10,464		1,591,777		767,423
2039		121,676	10,508,785		121,676		1,621,088		796,734
2040		495	10,509,280		495		1,654,923		830,569
2041		91,631	10,600,911		91,631		1,688,759		864,405
2042		45,354	10,646,265		45,354		1,723,453		899,099
2043		42,405	10,688,670		42,405		1,758,148		933,794
2044		53,245	10,741,915		53,245		1,791,089		966,735
2045		92,809	10,834,724		92,809		1,824,030		999,676
2046		217,308	11,052,032		217,308		1,857,129		1,032,775
2047		188,927	11,240,959		188,927		1,896,854		1,072,500
2048		153,199	11,394,158		153,199		1,936,737		1,112,383
2049		45,087	11,439,245		45,087		1,976,620		1,152,266
2050		63,644	11,502,889		63,644		1,999,876		1,175,522
2051		121,244	11,624,133		121,244		2,024,222		1,199,868
2052		145,781	11,769,914		145,781		2,055,538		1,231,184
TOTALS	7,289,760	4,480,154		3,659,562	8,110,352			824,354	

1/ GROSS INITIAL PROJECT INVESTMENT, RETIREMENTS INCLUDED

2B

FY 2005

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000
PRINCIPAL PAYMENTS

A	B	C	D	E
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 1/	BUREAU OF RECLAMATION APPROPRIATIONS GEN	IRRIGATION AMORTIZATION
2005	21,647	125,700	1,443	0
2006	0	118,680	7	0
2007	45,000	61,466	229	2,948
2008	104,301	0	0	2
2009	79,793	40,415	47	7,709
2010	94,686	39,745	108	0
2011	76,755	42,622	165	0
2012	0	99,798	107	811
2013	152,800	151,462	107	49,796
2014	77,000	247,643	974	48,554
2015	147,000	149,905	44,232	54,101
2016	27,000	231,382	100,171	64,264
2017	74,732	232,942	150,079	62,246
2018	38,317	493,613	150,575	25,460
2019	41,825	355,907	55,669	67,001
2020	426,293	45,980	25,577	36,743
2021		560,149	8,545	16,826
2022		544,071	51,350	15,831
2023		394,705	234,774	9,663
2024		585,443	81,883	21,072
2025		257,199	0	324,028
2026		68,941	470	
2027		91,206	68,711	
2028		17,805	154,755	
2029		141,385	0	
2030		29,387	0	
2031		115,624	845	
2032		105,778	3,022	
2033		42,535	6,068	
2034		32,801	0	
2035		146,866	0	
2036		58,924	542	
2037		43,221	50,429	
2038		2,502	7,962	
2039		121,676	0	
2040		495	0	
2041		91,631	0	
2042		43,638	1,716	
2043		35,697	6,708	
2044		53,245	0	
2045		92,809	0	
2046		216,506	802	
2047		17,663	171,264	
2048		105,090	48,109	
2049		45,087	0	
2050		63,644	0	
2051		121,244	0	
2052		86,142	59,639	
2053		65,524	94,605	
2054		4,734	0	
2055		122,138	0	
TOTALS	1,407,149	6,962,765	1,581,689	807,055

LEGEND

GEN = GENERATION
CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

TABLE 14B

2C

FY 2005

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A	B	C	D	E
	PRINCIPAL COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS			
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2005	271,125	7,819		12,204
2006	303,909	8,279		12,903
2007	334,063	8,466		13,661
2008	362,107	9,234		14,460
2009	373,083	9,831		15,328
2010	390,978			15,801
2011	447,733			16,741
2012	518,636			17,772
2013	256,168			18,888
2014	274,401			16,087
2015	307,002			13,628
2016	315,952			12,358
2017	282,241			13,006
2018	131,337			13,681
2019	31,886			14,390
2020	34,080			15,149
2021	36,425			15,943
2022	38,931			13,856
2023	41,610			14,970
2024	44,472			15,789
2025	47,532			1,529
2026	50,802			1,000
2027	54,297			1,000
2028	58,033			1,000
2029	62,026			1,000
2030	66,293			
2031	70,854			
2032	75,729			
2033	80,939			
2034	86,507			
2035	92,459			
2036	98,820			
2037	105,619			
2038	112,886			
2039	120,652			
2040	128,953			
2041	137,825			
2042	147,308			
2043	157,442			
2044	168,274			
2045	179,852			
2046	192,225			
2047	205,451			
2048	219,586			
2049	234,693			
2050	250,840			
2051	268,098			
2052	286,543			
2053	306,257			
2054	327,327			
TOTALS	9,190,260	43,629		302,144

TABLE 14C

2D

FY 2005

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

A	B	C	D
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS 1/ CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 2/	BUREAU OF RECLAMATION APPROPRIATIONS GEN
2005	78,077	228,010	38,675
2006	79,589	222,880	38,632
2007	80,431	214,583	38,632
2008	77,694	210,293	38,615
2009	71,555	210,293	38,615
2010	69,619	207,440	38,612
2011	61,562	210,927	38,605
2012	54,102	215,025	38,594
2013	45,298	211,629	40,063
2014	35,614	205,293	41,532
2015	30,021	193,944	41,462
2016	18,508	190,942	38,302
2017	13,838	180,666	32,393
2018	2,671	170,020	28,057
2019	8,058	139,351	22,437
2020	22,167	115,024	18,459
2021	-25,142	116,173	16,631
2022	-25,124	89,207	17,349
2023	-25,116	61,215	17,220
2024	-25,604	38,282	4,850
2025	-25,636	9,562	0
2026	-25,656	1,932	14
2027	-25,656	2,667	2,045
2028	-25,656	530	4,609
2029	4,147	4,147	0
2030	853	853	0
2031	3,283	3,283	25
2032	3,034	3,034	89
2033	1,261	1,261	181
2034	960	960	0
2035	4,270	4,270	0
2036	1,641	1,641	15
2037	1,260	1,260	1,507
2038	73	73	233
2039	-25,693	3,520	0
2040	-25,693	15	0
2041	-25,693	2,619	0
2042	-25,693	1,249	51
2043	-25,693	1,057	200
2044	-25,693	1,539	0
2045	-25,693	2,665	0
2046	-25,693	6,237	24
2047	-25,693	502	5,104
2048	-25,693	3,134	1,440
2049	-25,693	1,327	0
2050	-25,693	1,874	0
2051	-25,693	3,449	0
2052	-25,693	2,534	1,776
2053	-25,693	1,865	2,809
2054	-25,693	139	0
2055	-37,565	3,544	0
TOTALS	117,343	3,503,939	647,857

LEGEND

GEN = GENERATION
CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC
2/ INCLUDES PAYMENTS FOR LOWER SNAKE FISH & WILDLIFE

TABLE 14D

FY 2005

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

INTEREST COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS

	B	C	D	E
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2005	234,090	2,171		13,028
2006	235,895	1,730		12,334
2007	223,396	1,247		11,579
2008	207,504	725		10,767
2009	189,485	-10,330		9,878
2010	169,758			8,955
2011	132,598			7,993
2012	81,685			9,172
2013	105,470			4,021
2014	81,240			7,363
2015	47,941			6,466
2016	31,056			5,767
2017	-11,570			5,128
2018	-22,482			4,452
2019	295,441			3,736
2020	293,247			2,982
2021	290,902			-752
2022	288,396			1,834
2023	285,718			943
2024	282,855			-13,341
2025	279,795			27
2026	276,525			
2027	273,030			
2028	269,294			
2029	265,302			
2030	261,034			
2031	256,473			
2032	251,599			
2033	246,389			
2034	240,820			
2035	234,868			
2036	228,507			
2037	221,708			
2038	214,442			
2039	206,675			
2040	198,374			
2041	189,502			
2042	180,020			
2043	169,885			
2044	159,053			
2045	147,476			
2046	135,102			
2047	121,877			
2048	107,742			
2049	92,634			
2050	76,488			
2051	59,230			
2052	40,785			
2053	21,070			
2054	0			
TOTALS	8,868,327	-4,457		112,325

2F

FY 2005

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000

SUMMARY TOTALS

A	B	C	D	E	F	G
FISCAL YEAR ENDING SEPT 30	PRINCIPAL 1/			INTEREST		
	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT
2005	148,790	291,148	439,938	344,762	249,288	594,050
2006	118,687	325,091	443,778	341,101	249,959	591,060
2007	109,643	356,190	465,833	333,646	236,222	569,868
2008	104,303	385,801	490,104	326,602	218,995	545,597
2009	127,964	398,242	526,206	320,463	189,033	509,496
2010	134,539	406,779	541,318	315,671	178,712	494,383
2011	119,542	464,474	584,016	311,094	140,591	451,685
2012	100,716	536,408	637,124	307,721	90,856	398,577
2013	354,165	275,056	629,221	296,990	109,490	406,480
2014	374,171	290,488	664,659	282,439	88,603	371,042
2015	395,238	320,630	715,868	265,427	54,407	319,834
2016	422,817	328,310	751,127	247,752	36,822	284,574
2017	519,999	295,247	815,246	226,897	-6,442	220,455
2018	707,965	145,018	852,983	200,748	-18,030	182,718
2019	520,402	46,276	566,678	169,846	299,176	469,022
2020	534,593	49,229	583,822	155,650	296,229	451,879
2021	585,520	52,368	637,888	107,662	290,151	397,813
2022	611,252	52,787	664,039	81,432	290,230	371,662
2023	639,142	56,580	695,722	53,319	286,661	339,980
2024	688,398	60,261	748,659	17,528	269,514	287,042
2025	581,227	49,061	630,288	-16,074	279,822	263,748
2026	69,411	51,802	121,213	-23,710	276,525	252,815
2027	159,917	55,297	215,214	-20,944	273,030	252,086
2028	172,560	59,033	231,593	-20,517	269,294	248,777
2029	141,385	63,026	204,411	8,294	265,302	273,596
2030	29,387	66,293	95,680	1,706	261,034	262,740
2031	116,469	70,854	187,323	6,591	256,473	263,064
2032	108,800	75,729	184,529	6,157	251,599	257,756
2033	48,603	80,939	129,542	2,703	246,389	249,092
2034	32,801	86,507	119,308	1,920	240,820	242,740
2035	146,866	92,459	239,325	8,540	234,868	243,408
2036	59,466	98,820	158,286	3,297	228,507	231,804
2037	93,650	105,619	199,269	4,027	221,708	225,735
2038	10,464	112,886	123,350	379	214,442	214,821
2039	121,676	120,652	242,328	-22,173	206,675	184,502
2040	495	128,953	129,448	-25,678	198,374	172,696
2041	91,631	137,825	229,456	-23,074	189,502	166,428
2042	45,354	147,308	192,662	-24,393	180,020	155,627
2043	42,405	157,442	199,847	-24,436	169,885	145,449
2044	53,245	168,274	221,519	-24,154	159,053	134,899
2045	92,809	179,852	272,661	-23,028	147,476	124,448
2046	217,308	192,225	409,533	-19,432	135,102	115,670
2047	188,927	205,451	394,378	-20,087	121,877	101,790
2048	153,199	219,586	372,785	-21,119	107,742	86,623
2049	45,087	234,693	279,780	-24,366	92,634	68,268
2050	63,644	250,840	314,484	-23,819	76,488	52,669
2051	121,244	268,098	389,342	-22,244	59,230	36,986
2052	145,781	286,543	432,324	-21,383	40,785	19,402
2053	160,129	306,257	466,386	-21,019	21,070	51
2054	4,734	327,327	332,061	-25,554	0	-25,554
TOTALS	10,636,520	9,536,033	20,172,553	4,303,160	8,976,194	13,279,354

LEGEND

CCO = CAPITALIZED CONTRACT OBLIGATIONS

CONS = CONSERVATION

GEN = GENERATION

1/ INCLUDES PAYMENTS FOR THE IRRIGATION ASSISTANCE

TABLE 14F

2G

FY 2005

FEDERAL COLUMBIA RIVER POWER SYSTEM

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

A	B	C
FISCAL YEAR ENDING SEPT 30	UNAMORTIZED INVESTMENT	TERM SCHEDULE
CUMULATIVE 2001	4,612,116	5,596,616
2002	4,766,645	5,792,353
2003	4,901,731	5,763,515
2004	5,144,117	5,957,835
2005	5,215,322	6,030,084
2006	5,096,635	5,976,884
2007	4,989,940	5,875,278
2008	4,885,639	5,542,103
2009	4,765,384	5,423,941
2010	4,630,845	5,361,097
2011	4,729,462	5,524,028
2012	4,660,624	5,426,558
2013	4,502,748	5,420,144
2014	4,236,610	5,389,942
2015	4,058,582	5,405,944
2016	3,806,108	5,425,919
2017	3,470,059	5,446,370
2018	3,078,597	5,606,734
2019	2,640,621	5,454,536
2020	2,165,377	5,333,300
2021	1,721,024	5,312,752
2022	1,304,590	5,400,454
2023	751,874	5,302,873
2024	87,017	5,295,807
2025		5,127,340
2026		4,898,123
2027		4,908,221
2028		4,861,734
2029		4,691,817
2030		4,696,545
2031		4,656,201
2032		4,486,468
2033		4,210,638
2034		4,227,677
2035		4,225,602
2036		4,225,751
2037		4,226,761
2038		4,210,074
2039		4,257,726
2040		4,255,440
2041		4,276,945
2042		4,262,247
2043		4,135,117
2044		4,015,032
2045		3,853,557
2046		3,703,657
2047		3,672,277
2048		3,599,098
2049		3,384,233
2050		3,322,332
2051		2,947,424
2052		2,819,003
2053		2,778,758
2054		2,544,865
2055		2,440,525

TABLE 14G

2A
FY 2006
FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000)

TABLE 15A

A	B	C	D	E	F	G	H	I	J
FISCAL	INVESTMENT PLACED IN SERVICE						IRRIGATION ASSISTANCE		
YEAR ENDING SEPT 30	INITIAL 1/ PROJECT THRU 9-30 +	REPLACE-MENTS THRU 9-30 =	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION 9-30 -	DISCRE-TIONARY AMORTIZATION =	UNAMOR-TIZED INVESTMENT	CUMULATIVE AMOUNT IN SERVICE -	AMORTI-ZATION =	UNAMORTIZED AMOUNT
CUMULATIVE									
1998	5,347,000	179,664	5,526,664	1,703,513		3,823,151	774,206		774,206
1999	255,994		5,782,658	27,655		4,051,490	774,206		774,206
2000	177,315		5,959,973	50,019		4,178,786	774,206		774,206
2001	486,719		6,446,692	53,389		4,612,116	774,206	16,560	757,646
2002	261,737		6,708,429	107,208		4,766,645	774,206		757,646
2003	207,568		6,915,997	72,482		4,901,731	774,206		757,646
2004	333,432		7,249,429	91,046		5,144,117	774,206	739	756,907
2005	219,995		7,469,424	148,319		5,215,793	774,206		756,907
2006	254,899		7,724,323	126,242		5,344,450	774,206		756,907
2007			7,724,323	106,746		5,237,704	774,206	2,921	753,986
2008			7,724,323	104,301		5,133,403	774,206	29	753,957
2009			7,724,323	118,162	2,120	5,013,121	774,206	7,709	746,248
2010			7,724,323	62,753	71,807	4,878,561	781,148		753,190
2011		281,643	8,005,966	43,569	74,652	5,041,983	787,714		759,756
2012		40,108	8,046,074	55,847	40,194	4,986,050	791,190	811	762,421
2013		189,123	8,235,197	152,907	145,854	4,876,412	810,983	49,796	732,418
2014		76,787	8,311,984	77,107	240,777	4,635,315	848,513	48,554	721,394
2015		210,572	8,522,556	147,107	183,954	4,514,826	853,620	54,101	672,400
2016		136,945	8,659,501	99,919	245,690	4,306,162	859,014	64,264	613,530
2017		157,119	8,816,620	90,095	351,620	4,021,566	894,267	62,246	586,537
2018		375,737	9,192,357	99,197	562,633	3,735,473	945,454	25,460	612,264
2019		19,913	9,212,270	42,827	378,029	3,334,530	956,356	67,001	556,165
2020		29,185	9,241,455	35,021	433,124	2,895,570	977,614	36,743	540,680
2021		160,526	9,401,981	111,696	410,682	2,533,718	1,016,821	16,826	563,061
2022		231,073	9,633,054	30,411	523,230	2,211,150	1,055,870	15,831	586,279
2023		99,098	9,732,152	1,725	581,920	1,726,603	1,084,950	9,663	605,696
2024		3,188	9,735,340	115	617,884	1,111,792	1,126,756	21,072	626,430
2025		219,706	9,955,046	128,014	524,060	679,424	1,146,793	18,288	628,179
2026		89,609	10,044,655	80,899	600,657	87,477	1,180,021	18,876	642,531
2027		206,451	10,251,106		293,928		1,212,249	286,864	387,895
2028		222,776	10,473,882		222,776		1,245,635		421,281
2029		182,529	10,656,411		182,529		1,290,432		466,078
2030		37,938	10,694,349		37,938		1,320,395		496,041
2031		150,359	10,844,708		150,359		1,350,358		526,004
2032		140,461	10,985,169		140,461		1,395,155		570,801
2033		62,747	11,047,916		62,747		1,435,579		611,225
2034		42,345	11,090,261		42,345		1,476,003		651,649
2035		189,603	11,279,864		189,603		1,505,210		680,856
2036		76,768	11,356,632		72,812		1,533,759		709,405
2037		120,905	11,477,537		120,905		1,562,467		738,113
2038		13,508	11,491,045		13,508		1,591,777		767,423
2039		157,084	11,648,129		157,084		1,621,088		796,734
2040		639	11,648,768		639		1,654,923		830,569
2041		118,296	11,767,064		118,296		1,688,759		864,405
2042		58,552	11,825,616		58,552		1,723,453		899,099
2043		54,742	11,880,358		54,742		1,758,148		933,794
2044		68,740	11,949,098		68,740		1,791,089		966,735
2045		119,819	12,068,917		119,819		1,824,030		999,676
2046		280,543	12,349,460		280,543		1,857,129		1,032,775
2047		243,904	12,593,364		243,904		1,896,854		1,072,500
2048		197,781	12,791,145		197,781		1,936,737		1,112,383
2049		58,206	12,849,351		58,206		1,976,620		1,152,266
2050		82,164	12,931,515		82,164		1,999,876		1,175,522
2051		156,524	13,088,039		156,524		2,024,222		1,199,868
2052		188,205	13,276,244		188,205		2,055,538		1,231,184
2053		206,728	13,482,972		206,728		2,086,854		1,262,500
TOTALS	7,544,659	5,938,313		3,968,291	9,510,725			824,354	

1/ GROSS INITIAL PROJECT INVESTMENT, RETIREMENTS INCLUDED

2B

FY 2006

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

A	B	C	D	E
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 1/	BUREAU OF RECLAMATION APPROPRIATIONS GEN	IRRIGATION AMORTIZATION
2006	1	126,234	7	0
2007	45,000	61,517	229	2,921
2008	104,301	0	0	29
2009	79,820	40,415	47	7,709
2010	94,707	39,745	108	0
2011	69,572	48,484	165	0
2012	0	95,934	107	811
2013	152,800	145,399	562	49,796
2014	77,000	240,365	519	48,554
2015	147,000	139,829	44,232	54,101
2016	27,000	245,087	73,522	64,264
2017	74,732	289,932	77,051	62,246
2018	38,317	449,383	174,130	25,460
2019	41,825	289,859	89,172	67,001
2020	302,992	96,850	68,303	36,743
2021	220,983	294,012	7,383	16,826
2022		550,810	2,831	15,831
2023		579,385	4,260	9,663
2024		307,908	310,091	21,072
2025		510,749	141,325	18,288
2026		663,135	18,421	18,876
2027		205,223	88,705	286,864
2028		22,987	199,789	
2029		182,529	0	
2030		37,938	0	
2031		149,269	1,090	
2032		136,560	3,901	
2033		54,913	7,834	
2034		42,345	0	
2035		189,603	0	
2036		76,069	699	
2037		55,800	65,105	
2038		3,229	10,279	
2039		157,084	0	
2040		639	0	
2041		118,296	0	
2042		56,337	2,215	
2043		46,083	8,659	
2044		68,740	0	
2045		119,819	0	
2046		279,509	1,034	
2047		22,802	221,102	
2048		135,672	62,109	
2049		58,206	0	
2050		82,164	0	
2051		156,524	0	
2052		111,211	76,994	
2053		84,593	122,135	
2054		6,111	0	
2055		157,679	0	
2056		96,369	4,951	
TOTALS	1,476,050	8,129,335	1,889,066	807,055

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

TABLE 15B

2C

FY 2006

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

PRINCIPAL PAYMENTS

PRINCIPAL COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS

A	B	C	D	E
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2006	303,909	8,279		12,903
2007	334,063	8,466		13,661
2008	362,107	9,234		14,460
2009	373,083	9,831		15,328
2010	390,978			15,801
2011	447,733			16,741
2012	518,636			17,772
2013	256,168			18,888
2014	274,401			16,087
2015	307,002			13,628
2016	315,952			12,358
2017	282,241			13,006
2018	131,337			13,681
2019	32,919			14,390
2020	35,174			15,149
2021	37,584			15,943
2022	40,158			13,856
2023	42,909			14,970
2024	45,849			15,789
2025	48,989			1,529
2026	52,345			1,000
2027	55,931			1,000
2028	59,762			1,000
2029	63,855			1,000
2030	68,230			
2031	72,903			
2032	77,897			
2033	83,233			
2034	88,935			
2035	95,027			
2036	101,536			
2037	108,491			
2038	115,923			
2039	123,863			
2040	132,348			
2041	141,414			
2042	151,101			
2043	161,451			
2044	172,511			
2045	184,328			
2046	196,954			
2047	210,445			
2048	224,861			
2049	240,264			
2050	256,722			
2051	274,307			
2052	293,097			
2053	313,175			
2054	334,627			
2055	0			
TOTALS	9,036,724	35,810		289,940

TABLE 15C

2D

FY 2006

F E D E R A L   C O L U M B I A   R I V E R   P O W E R   S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

INTEREST PAYMENTS

A	B	C	D
FISCAL YEAR ENDING SEPT 30	BONNEVILLE POWER ADMINISTRATION BONDS 1/ CONS & GEN	CORPS OF ENGINEERS APPROPRIATIONS GEN 2/	BUREAU OF RECLAMATION APPROPRIATIONS GEN
2006	81,734	228,039	38,685
2007	85,961	223,836	38,737
2008	83,225	219,542	38,720
2009	77,086	219,542	38,720
2010	75,156	216,689	38,717
2011	66,686	221,931	38,710
2012	60,187	227,611	38,699
2013	51,369	225,555	40,586
2014	41,685	220,959	42,440
2015	36,091	211,921	42,403
2016	24,577	211,786	39,245
2017	19,902	202,344	35,601
2018	8,725	189,314	38,296
2019	14,391	163,162	32,451
2020	23,024	143,867	26,077
2021	-1,981	142,377	21,195
2022	-25,442	133,923	22,343
2023	-25,434	106,250	25,949
2024	-25,923	72,543	27,847
2025	-25,955	60,622	9,401
2026	-25,975	39,477	1,052
2027	-25,975	8,071	2,625
2028	-25,975	678	5,913
2029	-25,975	5,310	0
2030	-26,012	1,091	0
2031	-26,012	4,189	32
2032	-26,012	3,875	115
2033	-26,012	1,616	233
2034	-26,012	1,228	0
2035	-26,012	5,461	0
2036	-26,012	2,091	21
2037	-26,012	1,613	1,935
2038	-26,012	91	299
2039	4,497	4,497	0
2040	19	19	0
2041	3,345	3,345	0
2042	1,596	1,596	65
2043	1,356	1,356	257
2044	1,967	1,967	0
2045	3,403	3,403	0
2046	7,969	7,969	31
2047	641	641	6,552
2048	4,022	4,022	1,847
2049	-26,012	1,699	0
2050	-26,012	2,401	0
2051	-26,012	4,404	0
2052	-26,012	3,248	2,279
2053	-26,012	2,375	3,602
2054	-26,012	176	0
2055	-38,169	4,529	0
2056	-38,169	2,697	147
TOTALS	103,461	3,766,948	701,827

LEGEND

GEN = GENERATION

CONS = CONSERVATION

1/ NET OF INTEREST INCOME AND AFUDC

2/ INCLUDES PAYMENTS FOR LOWER SNAKE FISH & WILDLIFE

TABLE 15D

2E

FY 2006

FEDERAL COLUMBIA RIVER POWER SYSTEM
GENERATION REPAYMENT STUDY
(ALL AMOUNTS IN $1000
INTEREST PAYMENTS

INTEREST COMPONENT OF CAPITALIZED CONTRACT OBLIGATIONS

	B	C	D	E
FISCAL YEAR ENDING SEPT 30	SUPPLY SYSTEM PROJECTS	TROJAN	HANFORD	IDAHO FALLS & CONSERVATION
2006	235,895	1,730		12,334
2007	223,396	1,247		11,579
2008	207,504	725		10,767
2009	189,485	-10,330		9,878
2010	169,758			8,955
2011	132,598			7,993
2012	81,685			9,172
2013	105,470			4,021
2014	81,240			7,363
2015	47,941			6,466
2016	31,056			5,767
2017	-11,570			5,128
2018	-22,482			4,452
2019	301,708			3,736
2020	299,453			2,982
2021	297,043			-752
2022	294,469			1,834
2023	291,718			943
2024	288,778			-13,341
2025	285,638			27
2026	282,282			
2027	278,696			
2028	274,865			
2029	270,772			
2030	266,397			
2031	261,724			
2032	256,730			
2033	251,394			
2034	245,692			
2035	239,600			
2036	233,091			
2037	226,136			
2038	218,704			
2039	210,764			
2040	202,279			
2041	193,213			
2042	183,526			
2043	173,176			
2044	162,116			
2045	150,299			
2046	137,673			
2047	124,182			
2048	109,766			
2049	94,363			
2050	77,905			
2051	60,320			
2052	41,530			
2053	21,452			
2054	0			
2055	0			
TOTALS	8,779,432	-6,628		99,297

TABLE 15E

2F

FY 2006

F E D E R A L C O L U M B I A R I V E R P O W E R S Y S T E M

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000

SUMMARY TOTALS

A	B	C	D	E	F	G
FISCAL YEAR ENDING SEPT 30	PRINCIPAL 1/			INTEREST		
	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT	CONS & GEN PAYMENT	COMPONENT OF CCO	TOTAL PAYMENT
2006	126,242	325,091	451,333	348,458	249,959	598,417
2007	109,667	356,190	465,857	348,534	236,222	584,756
2008	104,330	385,801	490,131	341,487	218,995	560,482
2009	127,991	398,242	526,233	335,348	189,033	524,381
2010	134,560	406,779	541,339	330,562	178,712	509,274
2011	118,221	464,474	582,695	327,327	140,591	467,918
2012	96,852	536,408	633,260	326,497	90,856	417,353
2013	348,557	275,056	623,613	317,510	109,490	427,000
2014	366,438	290,488	656,926	305,084	88,603	393,687
2015	385,162	320,630	705,792	290,415	54,407	344,822
2016	409,873	328,310	738,183	275,608	36,822	312,430
2017	503,961	295,247	799,208	257,847	-6,442	251,405
2018	687,290	145,018	832,308	236,335	-18,030	218,305
2019	487,857	47,309	535,166	210,004	305,443	515,447
2020	504,888	50,323	555,211	192,968	302,434	495,402
2021	539,204	53,527	592,731	161,591	296,292	457,883
2022	569,472	54,014	623,486	130,824	296,303	427,127
2023	593,308	57,879	651,187	106,765	292,661	399,426
2024	639,071	61,638	700,709	74,467	275,437	349,904
2025	670,362	50,518	720,880	44,068	285,665	329,733
2026	700,432	53,345	753,777	14,554	282,282	296,836
2027	580,792	56,931	637,723	-15,279	278,696	263,417
2028	222,776	60,762	283,538	-19,384	274,865	255,481
2029	182,529	64,855	247,384	-20,665	270,772	250,107
2030	37,938	68,230	106,168	-24,921	266,397	241,476
2031	150,359	72,903	223,262	-21,791	261,724	239,933
2032	140,461	77,897	218,358	-22,022	256,730	234,708
2033	62,747	83,233	145,980	-24,163	251,394	227,231
2034	42,345	88,935	131,280	-24,784	245,692	220,908
2035	189,603	95,027	284,630	-20,551	239,600	219,049
2036	76,768	101,536	178,304	-23,900	233,091	209,191
2037	120,905	108,491	229,396	-22,464	226,136	203,672
2038	13,508	115,923	129,431	-25,622	218,704	193,082
2039	157,084	123,863	280,947	8,994	210,764	219,758
2040	639	132,348	132,987	38	202,279	202,317
2041	118,296	141,414	259,710	6,690	193,213	199,903
2042	58,552	151,101	209,653	3,257	183,526	186,783
2043	54,742	161,451	216,193	2,969	173,176	176,145
2044	68,740	172,511	241,251	3,934	162,116	166,050
2045	119,819	184,328	304,147	6,806	150,299	157,105
2046	280,543	196,954	477,497	15,969	137,673	153,642
2047	243,904	210,445	454,349	7,834	124,182	132,016
2048	197,781	224,861	422,642	9,891	109,766	119,657
2049	58,206	240,264	298,470	-24,313	94,363	70,050
2050	82,164	256,722	338,886	-23,611	77,905	54,294
2051	156,524	274,307	430,831	-21,608	60,320	38,712
2052	188,205	293,097	481,302	-20,485	41,530	21,045
2053	206,728	313,175	519,903	-20,035	21,452	1,417
2054	6,111	334,627	340,738	-25,836	0	-25,836
2055	157,679	0	157,679	-33,640	0	-33,640
TOTALS	12,200,186	9,362,474	21,562,660	4,607,561	8,872,101	13,479,662

LEGEND

CCO = CAPITALIZED CONTRACT OBLIGATIONS

CONS = CONSERVATION

GEN = GENERATION

1/ INCLUDES PAYMENTS FOR THE IRRIGATION ASSISTANCE

TABLE 15F

2G

FY 2006

FEDERAL COLUMBIA RIVER POWER SYSTEM

GENERATION REPAYMENT STUDY

(ALL AMOUNTS IN $1000)

A	B	C
FISCAL YEAR ENDING SEPT 30	UNAMORTIZED INVESTMENT	TERM SCHEDULE
CUMULATIVE 2001	4,612,116	5,596,616
2002	4,766,645	5,792,353
2003	4,901,731	5,763,515
2004	5,144,117	5,957,835
2005	5,215,793	6,030,084
2006	5,344,450	6,231,783
2007	5,237,704	6,130,177
2008	5,133,403	5,797,002
2009	5,013,121	5,678,840
2010	4,878,561	5,615,996
2011	5,041,983	5,842,411
2012	4,986,050	5,753,982
2013	4,876,412	5,790,198
2014	4,635,315	5,777,304
2015	4,514,826	5,840,769
2016	4,306,162	5,875,091
2017	4,021,566	5,927,494
2018	3,735,473	6,158,829
2019	3,334,530	6,011,075
2020	2,895,570	5,896,410
2021	2,533,718	5,860,392
2022	2,211,150	5,993,325
2023	1,726,603	5,917,691
2024	1,111,792	5,911,318
2025	679,424	5,763,520
2026	87,477	5,536,267
2027		5,581,783
2028		5,584,831
2029		5,440,968
2030		5,448,125
2031		5,407,857
2032		5,248,838
2033		4,984,015
2034		5,006,012
2035		5,017,364
2036		5,017,633
2037		5,040,046
2038		5,023,988
2039		5,085,507
2040		5,083,358
2041		5,113,667
2042		5,102,357
2043		4,984,058
2044		4,865,603
2045		4,708,282
2046		4,558,578
2047		4,565,231
2048		4,496,380
2049		4,284,192
2050		4,234,031
2051		3,795,623
2052		3,668,953
2053		3,640,448
2054		3,406,555
2055		3,307,323
2056		3,154,443

Table 16

Application of Amortization
Generation
FY 2006 Repayment Study

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
1999	FISH, WILDLIFE & ENVIRONMENTAL	1989	1999	25,000	25,000	.08950		25,000
	LOWER MONUMENTAL	1996	2016	668	668	.07290		668
	JOHN DAY	1996	2016	1,072	1,072	.07290		1,072
	BONNEVILLE	1996	2016	834	834	.07290	R	834
	ALBENI FALLS	1996	2016	130	130	.07290		81
	TOTAL							27,655
2000	COLUMBIA BASIN	1995	2000	25	25	.06620		25
	HUNGRY HORSE	1995	2000	6	6	.06620	R	6
	HUNGRY HORSE	1995	2000	84	84	.06620		84
	BUREAU DIRECT FUND	1997	2000	24,536	24,536	.06500		24,536
	BPA PROGRAM	1995	2025	67	67	.07700		67
	ALBENI FALLS	1996	2016	130	49	.07290		49
	LOWER GRANITE	1995	2017	458	458	.07290		458
	LOWER GRANITE	1995	2017	388	388	.07290		388
	LOWER GRANITE	1995	2017	77	77	.07290	R	77
	GREEN PETER-FOSTER	1967	2017	11,919	11,919	.07290		11,919
	COLUMBIA BASIN	1967	2017	48	48	.07290		48
	COLUMBIA BASIN	1967	2017	758	758	.07290		758
	GREEN PETER-FOSTER	1987	2018	1	1	.07280		1
	GREEN PETER-FOSTER	1986	2018	3	3	.07280		3
	GREEN PETER-FOSTER	1985	2018	16	16	.07280		16
	GREEN PETER-FOSTER	1983	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1982	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1981	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1980	2018	40	40	.07280	R	40
	GREEN PETER-FOSTER	1979	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1978	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1977	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1976	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1975	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1974	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1973	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1972	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1971	2018	39	39	.07280	R	39
	GREEN PETER-FOSTER	1970	2018	40	40	.07280	R	40
	GREEN PETER-FOSTER	1969	2018	39	39	.07280	R	39
	JOHN DAY	1968	2018	21,686	21,686	.07280		10,997
	TOTAL							50,019

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

+	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2001	COLUMBIA BASIN	1956	2001	259	259	.06710	R	259
	COLUMBIA BASIN	1956	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1957	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1957	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1958	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1958	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1959	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1959	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1960	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1960	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1961	2001	259	259	.06710	R	259
	COLUMBIA BASIN	1961	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1962	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1962	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1963	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1963	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1964	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1964	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1965	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1965	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1966	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1966	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1967	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1968	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1968	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1969	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1969	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1970	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1970	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1971	2001	259	259	.06710	R	259
	COLUMBIA BASIN	1971	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1972	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1972	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1973	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1973	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1955	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1974	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1974	2001	48	48	.06710	R	48

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

+	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
	COLUMBIA BASIN	1975	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1975	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1976	2001	259	259	.06710	R	259
	COLUMBIA BASIN	1976	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1977	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1977	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1978	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1978	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1979	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1979	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1980	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1980	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1981	2001	259	259	.06710	R	259
	COLUMBIA BASIN	1981	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1982	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1982	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1983	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1983	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1985	2001	236	236	.06710		236
	COLUMBIA BASIN	1985	2001	11	11	.06710		11
	BOISE	1986	2001	89	89	.06710		89
	COLUMBIA BASIN	1986	2001	127	127	.06710		127
	COLUMBIA BASIN	1987	2001	13	13	.06710		13
	COLUMBIA BASIN	1951	2001	7,719	7,719	.06710		7,719
	COLUMBIA BASIN	1951	2001	1,437	1,437	.06710		1,437
	COLUMBIA BASIN	1952	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1993	2001	45	45	.06710		45
	COLUMBIA BASIN	1952	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1953	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1953	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1955	2001	48	48	.06710	R	48
	COLUMBIA BASIN	1954	2001	258	258	.06710	R	258
	COLUMBIA BASIN	1954	2001	48	48	.06710	R	48
	JOHN DAY	1968	2018	21,686	10,689	.07280		10,689
	GREEN PETER-FOSTER	1968	2018	12,180	12,180	.07280		12,180
	ICE HARBOR	1995	2019	849	849	.07270		849
	ICE HARBOR	1995	2019	171	171	.07270		171
	ICE HARBOR	1995	2019	84	84	.07270		84
	LOWER MONUMENTAL	1969	2019	25,083	25,083	.07270		9,990

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	TOTAL							53,389
2002	BPA CONSERVATION	1989	2002	66,000	66,000	.08650		66,000
	LOWER MONUMENTAL	1969	2019	25,083	15,093	.07270		15,093
	JOHN DAY	1969	2019	96,104	96,104	.07270		26,115
	TOTAL							107,208
2003	HUNGRY HORSE	1955	2003	1	1	.06840	R	1
	HUNGRY HORSE	1955	2003	17	17	.06840	R	17
	HUNGRY HORSE	1956	2003	17	17	.06840	R	17
	BPA PROGRAM	1996	2003	5,622	5,622	.05900		5,622
	HUNGRY HORSE	1956	2003	1	1	.06840	R	1
	HUNGRY HORSE	1957	2003	18	18	.06840	R	18
	HUNGRY HORSE	1957	2003	1	1	.06840	R	1
	HUNGRY HORSE	1958	2003	18	18	.06840	R	18
	HUNGRY HORSE	1958	2003	1	1	.06840	R	1
	HUNGRY HORSE	1959	2003	18	18	.06840	R	18
	HUNGRY HORSE	1959	2003	1	1	.06840	R	1
	HUNGRY HORSE	1960	2003	18	18	.06840	R	18
	HUNGRY HORSE	1960	2003	1	1	.06840	R	1
	HUNGRY HORSE	1961	2003	18	18	.06840	R	18
	HUNGRY HORSE	1961	2003	1	1	.06840	R	1
	HUNGRY HORSE	1962	2003	18	18	.06840	R	18
	HUNGRY HORSE	1962	2003	1	1	.06840	R	1
	HUNGRY HORSE	1963	2003	18	18	.06840	R	18
	HUNGRY HORSE	1963	2003	1	1	.06840	R	1
	HUNGRY HORSE	1964	2003	17	17	.06840	R	17
	HUNGRY HORSE	1964	2003	1	1	.06840	R	1
	HUNGRY HORSE	1965	2003	17	17	.06840	R	17
	HUNGRY HORSE	1965	2003	1	1	.06840	R	1
	HUNGRY HORSE	1966	2003	17	17	.06840	R	17
	HUNGRY HORSE	1966	2003	1	1	.06840	R	1
	HUNGRY HORSE	1967	2003	18	18	.06840	R	18
	HUNGRY HORSE	1967	2003	1	1	.06840	R	1
	HUNGRY HORSE	1954	2003	17	17	.06840	R	17
	HUNGRY HORSE	1968	2003	18	18	.06840	R	18
	HUNGRY HORSE	1968	2003	1	1	.06840	R	1
	HUNGRY HORSE	1954	2003	1	1	.06840	R	1
	HUNGRY HORSE	1969	2003	18	18	.06840	R	18

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

+

PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
HUNGRY HORSE	1969	2003	1	1	.06840	R	1
HUNGRY HORSE	1970	2003	18	18	.06840	R	18
HUNGRY HORSE	1970	2003	1	1	.06840	R	1
HUNGRY HORSE	1971	2003	18	18	.06840	R	18
HUNGRY HORSE	1971	2003	1	1	.06840	R	1
HUNGRY HORSE	1972	2003	18	18	.06840	R	18
HUNGRY HORSE	1972	2003	1	1	.06840	R	1
HUNGRY HORSE	1973	2003	18	18	.06840	R	18
HUNGRY HORSE	1973	2003	1	1	.06840	R	1
HUNGRY HORSE	1974	2003	17	17	.06840	R	17
HUNGRY HORSE	1974	2003	1	1	.06840	R	1
HUNGRY HORSE	1975	2003	17	17	.06840	R	17
HUNGRY HORSE	1975	2003	1	1	.06840	R	1
HUNGRY HORSE	1953	2003	490	490	.06840		490
HUNGRY HORSE	1976	2003	10	10	.06840	R	10
HUNGRY HORSE	1976	2003	1	1	.06840	R	1
HUNGRY HORSE	1977	2003	18	18	.06840	R	18
HUNGRY HORSE	1977	2003	1	1	.06840	R	1
HUNGRY HORSE	1978	2003	18	18	.06840	R	18
HUNGRY HORSE	1978	2003	1	1	.06840	R	1
HUNGRY HORSE	1979	2003	18	18	.06840	R	18
HUNGRY HORSE	1979	2003	1	1	.06840	R	1
HUNGRY HORSE	1980	2003	18	18	.06840	R	18
HUNGRY HORSE	1980	2003	1	1	.06840	R	1
HUNGRY HORSE	1981	2003	1	1	.06840	R	1
HUNGRY HORSE	1981	2003	1	1	.06840	R	1
HUNGRY HORSE	1982	2003	1	1	.06840	R	1
HUNGRY HORSE	1983	2003	12	12	.06840	R	12
HUNGRY HORSE	1983	2003	1	1	.06840	R	1
DETROIT-BIG CLIFF	1953	2003	3,078	3,078	.06840		3,078
HUNGRY HORSE	1953	2003	16,359	16,359	.06840		16,359
JOHN DAY	1969	2019	96,104	69,989	.07270		46,420

TOTAL							72,482

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2004	DETROIT-BIG CLIFF	1956	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1957	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1958	2004	19	19	.06880	R	19
	BPA PROGRAM	1997	2004	7,400	7,400	.06800		7,400
	DETROIT-BIG CLIFF	1959	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1960	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1961	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1962	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1963	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1964	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1965	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1966	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1967	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1968	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1969	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1970	2004	19	19	.06880	R	19
	MCNARY	1954	2004	35,757	35,757	.06880		35,757
	DETROIT-BIG CLIFF	1971	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1972	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1955	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1973	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1974	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1975	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1976	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1977	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1978	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1979	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1980	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1981	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1982	2004	19	19	.06880	R	19
	DETROIT-BIG CLIFF	1983	2004	18	18	.06880	R	18
	DETROIT-BIG CLIFF	1985	2004	6	6	.06880		6
	DETROIT-BIG CLIFF	1987	2004	3	3	.06880		3
	DETROIT-BIG CLIFF	1954	2004	20,162	20,162	.06880		20,162
	BPA PROGRAM	1999	2044	4,400	4,400	.07620		4,400
	BUREAU DIRECT FUND	1999	2044	54,600	54,600	.07620		22,782
	TOTAL							91,046

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YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2005	ALBENI FALLS	1956	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1956	2005	52	52	.06910	R	52
	ALBENI FALLS	1957	2005	10	10	.06910	R	10
	LOOKOUT POINT-DEXTER	1957	2005	51	51	.06910	R	51
	ALBENI FALLS	1958	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1958	2005	51	51	.06910	R	51
	ALBENI FALLS	1959	2005	11	11	.06910	R	11
	MCNARY	1955	2005	53,493	53,493	.06910		53,493
	LOOKOUT POINT-DEXTER	1959	2005	51	51	.06910	R	51
	ALBENI FALLS	1960	2005	10	10	.06910	R	10
	LOOKOUT POINT-DEXTER	1960	2005	51	51	.06910	R	51
	ALBENI FALLS	1961	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1961	2005	52	52	.06910	R	52
	ALBENI FALLS	1962	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1962	2005	51	51	.06910	R	51
	ALBENI FALLS	1963	2005	10	10	.06910	R	10
	LOOKOUT POINT-DEXTER	1963	2005	51	51	.06910	R	51
	ALBENI FALLS	1964	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1964	2005	51	51	.06910	R	51
	ALBENI FALLS	1965	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1965	2005	51	51	.06910	R	51
	ALBENI FALLS	1966	2005	10	10	.06910	R	10
	LOOKOUT POINT-DEXTER	1966	2005	51	51	.06910	R	51
	ALBENI FALLS	1967	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1967	2005	52	52	.06910	R	52
	ALBENI FALLS	1968	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1968	2005	51	51	.06910	R	51
	ALBENI FALLS	1969	2005	10	10	.06910	R	10
	LOOKOUT POINT-DEXTER	1969	2005	51	51	.06910	R	51
	LOOKOUT POINT-DEXTER	1955	2005	28,417	28,417	.06910		28,417
	ALBENI FALLS	1970	2005	11	11	.06910	R	11
	LOOKOUT POINT-DEXTER	1970	2005	51	51	.06910	R	51
	ALBENI FALLS	1971	2005	11	11	.06910	R	11
	ALBENI FALLS	1955	2005	16,854	16,854	.06910		16,854
	LOOKOUT POINT-DEXTER	1971	2005	51	51	.06910	R	51
	ALBENI FALLS	1972	2005	10	10	.06910	R	10
	CHIEF JOSEPH	1955	2005	2,262	2,262	.06910		2,262
	LOOKOUT POINT-DEXTER	1972	2005	51	51	.06910	R	51
	ALBENI FALLS	1973	2005	11	11	.06910	R	11

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YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

+

PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
LOOKOUT POINT-DEXTER	1973	2005	52	52	.06910	R	52
ALBENI FALLS	1974	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1974	2005	51	51	.06910	R	51
ALBENI FALLS	1975	2005	10	10	.06910	R	10
LOOKOUT POINT-DEXTER	1975	2005	51	51	.06910	R	51
ALBENI FALLS	1976	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1976	2005	51	51	.06910	R	51
ALBENI FALLS	1977	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1977	2005	51	51	.06910	R	51
ALBENI FALLS	1978	2005	10	10	.06910	R	10
LOOKOUT POINT-DEXTER	1978	2005	51	51	.06910	R	51
ALBENI FALLS	1979	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1979	2005	52	52	.06910	R	52
ALBENI FALLS	1980	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1980	2005	51	51	.06910	R	51
ALBENI FALLS	1981	2005	10	10	.06910	R	10
LOOKOUT POINT-DEXTER	1981	2005	51	51	.06910	R	51
ALBENI FALLS	1982	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1982	2005	51	51	.06910	R	51
ALBENI FALLS	1983	2005	11	11	.06910	R	11
LOOKOUT POINT-DEXTER	1983	2005	51	51	.06910	R	51
ALBENI FALLS	1985	2005	7	7	.06910		7
LOOKOUT POINT-DEXTER	1985	2005	52	52	.06910		52
ALBENI FALLS	1986	2005	293	293	.06910		293
LOOKOUT POINT-DEXTER	1986	2005	42	42	.06910		42
ALBENI FALLS	1987	2005	12	12	.06910		12
LOOKOUT POINT-DEXTER	1987	2005	9	9	.06910		9
BUREAU DIRECT FUND	1999	2044	54,600	31,818	.07620		28,781
YAKIMA-ROZA	1987	2008	2	2	.07020		2
MINIDOKA	1987	2008	16	16	.07020		16
YAKIMA-ROZA	1986	2008	6	6	.07020		6
MINIDOKA	1986	2008	21	21	.07020		21
YAKIMA-ROZA	1985	2008	69	69	.07020		69
MINIDOKA	1985	2008	21	21	.07020		21
CHIEF JOSEPH	1985	2008	46	46	.07020		46
MINIDOKA	1983	2008	20	20	.07020	R	20
MINIDOKA	1983	2008	65	65	.07020	R	65
CHIEF JOSEPH	1983	2008	224	224	.07020	R	224
MINIDOKA	1982	2008	19	19	.07020	R	19

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR --INVESTMENT PAID--

(ALL AMOUNT IN $1000)

+

PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
MINIDOKA	1982	2008	75	75	.07020	R	75
CHIEF JOSEPH	1982	2008	223	223	.07020	R	223
MINIDOKA	1981	2008	20	20	.07020	R	20
MINIDOKA	1981	2008	75	75	.07020	R	75
CHIEF JOSEPH	1981	2008	223	223	.07020	R	223
MINIDOKA	1980	2008	20	20	.07020	R	20
MINIDOKA	1980	2008	75	75	.07020	R	75
CHIEF JOSEPH	1980	2008	223	223	.07020	R	223
MINIDOKA	1979	2008	19	19	.07020	R	19
MINIDOKA	1979	2008	75	75	.07020	R	75
CHIEF JOSEPH	1979	2008	223	223	.07020	R	223
MINIDOKA	1978	2008	20	20	.07020	R	20
MINIDOKA	1978	2008	75	75	.07020	R	75
CHIEF JOSEPH	1978	2008	224	224	.07020	R	224
MINIDOKA	1977	2008	56	56	.07020	R	56
CHIEF JOSEPH	1977	2008	223	223	.07020	R	223
THE DALLES	1996	2008	196	196	.07020		196
CHIEF JOSEPH	1976	2008	223	223	.07020	R	223
CHIEF JOSEPH	1975	2008	223	223	.07020	R	223
CHIEF JOSEPH	1974	2008	223	223	.07020	R	223
CHIEF JOSEPH	1973	2008	224	224	.07020	R	224
CHIEF JOSEPH	1972	2008	223	223	.07020	R	223
CHIEF JOSEPH	1971	2008	223	223	.07020	R	223
CHIEF JOSEPH	1970	2008	223	223	.07020	R	223
CHIEF JOSEPH	1969	2008	223	223	.07020	R	223
CHIEF JOSEPH	1968	2008	224	224	.07020	R	224
CHIEF JOSEPH	1967	2008	223	223	.07020	R	223
CHIEF JOSEPH	1966	2008	223	223	.07020	R	223
CHIEF JOSEPH	1965	2008	223	223	.07020	R	223
CHIEF JOSEPH	1964	2008	223	223	.07020	R	223
CHIEF JOSEPH	1963	2008	224	224	.07020	R	224
CHIEF JOSEPH	1962	2008	223	223	.07020	R	223
CHIEF JOSEPH	1961	2008	223	223	.07020	R	223
CHIEF JOSEPH	1960	2008	223	223	.07020	R	223
CHIEF JOSEPH	1959	2008	223	223	.07020	R	223
YAKIMA-ROZA	1958	2008	161	161	.07020		161
YAKIMA-ROZA	1958	2008	533	533	.07020		533
THE DALLES	1958	2008	33,988	33,988	.07020		9,100

TOTAL							148,319

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2006	CHIEF JOSEPH	1956	2006	13,643	13,643	.06950		13,643
	MCNARY	1956	2006	38,748	38,748	.06950		38,748
	BOISE	1996	2006	7	7	.06950		7
	MCNARY	1996	2006	778	778	.06950		778
	DETROIT-BIG CLIFF	1996	2006	24	24	.06950		24
	BUREAU DIRECT FUND	1999	2044	54,600	3,037	.07620		1
	THE DALLES	1958	2008	33,988	24,888	.07020		24,888
	CHIEF JOSEPH	1958	2008	31,901	31,901	.07020		31,901
	MCNARY	1987	2007	24	24	.06980		24
	MCNARY	1986	2007	454	454	.06980		454
	MCNARY	1985	2007	557	557	.06980		557
	MCNARY	1983	2007	468	468	.06980	R	468
	MCNARY	1982	2007	467	467	.06980	R	467
	MCNARY	1981	2007	468	468	.06980	R	468
	MCNARY	1980	2007	468	468	.06980	R	468
	MCNARY	1979	2007	468	468	.06980	R	468
	MCNARY	1978	2007	468	468	.06980	R	468
	MCNARY	1977	2007	467	467	.06980	R	467
	MCNARY	1976	2007	468	468	.06980	R	468
	MCNARY	1975	2007	468	468	.06980	R	468
	MCNARY	1974	2007	468	468	.06980	R	468
	MCNARY	1973	2007	467	467	.06980	R	467
	MCNARY	1972	2007	468	468	.06980	R	468
	MCNARY	1971	2007	468	468	.06980	R	468
	MCNARY	1970	2007	468	468	.06980	R	468
	MCNARY	1969	2007	468	468	.06980	R	468
	MCNARY	1968	2007	468	468	.06980	R	468
	MCNARY	1967	2007	467	467	.06980	R	467
	MCNARY	1966	2007	468	468	.06980	R	468
	MCNARY	1965	2007	468	468	.06980	R	468
	MCNARY	1964	2007	468	468	.06980	R	468
	MCNARY	1963	2007	468	468	.06980	R	468
	MCNARY	1962	2007	467	467	.06980	R	467
	MCNARY	1961	2007	468	468	.06980	R	468
	MCNARY	1960	2007	468	468	.06980	R	468
	MCNARY	1959	2007	468	468	.06980	R	468
	MCNARY	1958	2007	468	468	.06980	R	468
	MCNARY	1957	2007	24,985	24,985	.06980		3,054

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YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	TOTAL							126,242
2007	CHIEF JOSEPH	1957	2007	39,586	39,586	.06980		39,586
	MCNARY	1957	2007	24,985	21,931	.06980		21,931
	MINIDOKA	1997	2007	66	66	.06950		66
	HUNGRY HORSE	1997	2007	154	154	.06950		154
	BOISE	1997	2007	9	9	.06950		9
	FISH, WILDLIFE & ENVIRONMENTAL	1993	2008	20,000	20,000	.06950		20,000
	BUREAU DIRECT FUND	1998	2008	25,000	25,000	.06000		25,000
	TOTAL							106,746
2008	BPA CONSERVATION	1998	2008	104,300	104,300	.05300		104,300
	BUREAU DIRECT FUND	1999	2044	54,600	3,036	.07620		1
	TOTAL							104,301
2009	BPA CONSERVATION	1998	2009	37,700	37,700	.06000		37,700
	BPA CONSERVATION	1989	2009	40,000	40,000	.08550		40,000
	THE DALLES	1959	2009	40,415	40,415	.07060		40,415
	MINIDOKA	1999	2009	29	29	.06580		29
	BOISE	1999	2009	18	18	.06580		18
	BUREAU DIRECT FUND	1999	2044	54,600	3,035	.07620		2,120
	TOTAL							120,282
2010	THE DALLES	1960	2010	39,179	39,179	.07090		39,179
	FISH, WILDLIFE & ENVIRONMENTAL	1995	2010	22,900	22,900	.07200		22,900
	BOISE	2000	2010	27	27	.06520		27
	ALBENI FALLS	1995	2010	17	17	.07090		17
	MCNARY	1995	2010	509	509	.07090		509
	BONNEVILLE	1995	2010	25	25	.07090	R	25
	CHIEF JOSEPH	1995	2010	15	15	.07090		15
	MINIDOKA	2000	2010	81	81	.06520		81
	BUREAU DIRECT FUND	1999	2044	54,600	915	.07620		915
	BPA PROGRAM	2000	2045	4,100	4,100	.07540		4,100
	BUREAU DIRECT FUND	2000	2045	80,900	80,900	.07540		66,792
	TOTAL							134,560

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2011	BPA CONSERVATION	1996	2011	30,000	30,000	.06700		30,000
	MINIDOKA	2001	2011	80	80	.06190		80
	THE DALLES	1986	2011	95	95	.07130		95
	BOISE	2001	2011	4	4	.06190		4
	THE DALLES	1961	2011	9,492	9,492	.07130		9,492
	BOISE	2001	2011	27	27	.06190		27
	THE DALLES	1962	2011	56	56	.07130	R	56
	THE DALLES	1963	2011	57	57	.07130	R	57
	THE DALLES	1964	2011	57	57	.07130	R	57
	THE DALLES	1987	2011	1,417	1,417	.07130		1,417
	THE DALLES	1965	2011	56	56	.07130	R	56
	THE DALLES	1966	2011	57	57	.07130	R	57
	THE DALLES	1967	2011	57	57	.07130	R	57
	THE DALLES	1968	2011	56	56	.07130	R	56
	THE DALLES	1969	2011	57	57	.07130	R	57
	THE DALLES	1970	2011	57	57	.07130	R	57
	THE DALLES	1971	2011	56	56	.07130	R	56
	LOWER GRANITE	1996	2011	255	255	.07130		255
	JOHN DAY	1996	2011	237	237	.07130		237
	THE DALLES	1972	2011	57	57	.07130	R	57
	THE DALLES	1973	2011	57	57	.07130	R	57
	THE DALLES	1974	2011	56	56	.07130	R	56
	THE DALLES	1975	2011	57	57	.07130	R	57
	THE DALLES	1996	2011	457	457	.07130		457
	THE DALLES	1976	2011	57	57	.07130	R	57
	MINIDOKA	1996	2011	54	54	.07130		54
	THE DALLES	1977	2011	56	56	.07130	R	56
	THE DALLES	1978	2011	57	57	.07130	R	57
	DWORSHAK	1996	2011	107	107	.07130		107
	MCNARY	1996	2011	3	3	.07130		3
	THE DALLES	1979	2011	57	57	.07130	R	57
	THE DALLES	1980	2011	56	56	.07130	R	56
	THE DALLES	1985	2011	95	95	.07130		95
	THE DALLES	1981	2011	57	57	.07130	R	57
	THE DALLES	1982	2011	57	57	.07130	R	57
	THE DALLES	1983	2011	56	56	.07130	R	56
	BUREAU DIRECT FUND	2000	2045	80,900	14,108	.07540		14,108
	BUREAU DIRECT FUND	2000	2042	25,464	25,464	.07540		25,464
	JOHN DAY	1969	2019	96,104	23,569	.07270		23,569

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	JOHN DAY	1995	2020	79	79	.07250		79
	LOWER MONUMENTAL	1985	2020	8	8	.07250		8
	GREEN PETER-FOSTER	1995	2020	24	24	.07250		24
	GREEN PETER-FOSTER	1995	2020	11	11	.07250		11
	LOWER MONUMENTAL	1983	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1982	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1981	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1980	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1979	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1978	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1977	2020	214	214	.07250	R	214
	BONNEVILLE	1995	2020	22	22	.07250	R	22
	LOWER MONUMENTAL	1976	2020	214	214	.07250	R	214
	BONNEVILLE	1995	2020	20	20	.07250		20
	LOWER MONUMENTAL	1975	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1974	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1973	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1972	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1986	2020	132	132	.07250		132
	LOWER MONUMENTAL	1971	2020	214	214	.07250	R	214
	LOWER MONUMENTAL	1970	2020	51,218	51,218	.07250		8,433

	TOTAL							118,221
2012	MINIDOKA	2002	2012	80	80	.05940		80
	HILLS CREEK	1962	2012	9,264	9,264	.07160		9,264
	ICE HARBOR	1962	2012	44,308	44,308	.07160		44,308
	ICE HARBOR	1962	2012	1	1	.07160		1
	ICE HARBOR	1962	2012	493	493	.07160		493
	HILLS CREEK	1963	2012	12	12	.07160	R	12
	BOISE	2002	2012	27	27	.05940		27
	ICE HARBOR	1963	2012	46	46	.07160	R	46
	ICE HARBOR	1963	2012	1	1	.07160	R	1
	HILLS CREEK	1964	2012	13	13	.07160	R	13
	ICE HARBOR	1964	2012	46	46	.07160	R	46
	ICE HARBOR	1964	2012	1	1	.07160	R	1
	HILLS CREEK	1965	2012	13	13	.07160	R	13
	ICE HARBOR	1965	2012	46	46	.07160	R	46
	ICE HARBOR	1965	2012	1	1	.07160	R	1
	HILLS CREEK	1966	2012	13	13	.07160	R	13

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YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

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PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
ICE HARBOR	1966	2012	46	46	.07160	R	46
ICE HARBOR	1966	2012	1	1	.07160	R	1
HILLS CREEK	1967	2012	13	13	.07160	R	13
ICE HARBOR	1967	2012	46	46	.07160	R	46
ICE HARBOR	1967	2012	1	1	.07160	R	1
HILLS CREEK	1968	2012	13	13	.07160	R	13
ICE HARBOR	1968	2012	46	46	.07160	R	46
ICE HARBOR	1968	2012	1	1	.07160	R	1
ICE HARBOR	1987	2012	3	3	.07160		3
HILLS CREEK	1969	2012	13	13	.07160	R	13
ICE HARBOR	1969	2012	46	46	.07160	R	46
ICE HARBOR	1983	2012	1	1	.07160	R	1
ICE HARBOR	1983	2012	46	46	.07160	R	46
ICE HARBOR	1969	2012	1	1	.07160	R	1
HILLS CREEK	1970	2012	13	13	.07160	R	13
HILLS CREEK	1983	2012	13	13	.07160	R	13
ICE HARBOR	1970	2012	46	46	.07160	R	46
ICE HARBOR	1970	2012	1	1	.07160	R	1
HILLS CREEK	1971	2012	13	13	.07160	R	13
ICE HARBOR	1971	2012	46	46	.07160	R	46
ICE HARBOR	1971	2012	1	1	.07160	R	1
HILLS CREEK	1972	2012	13	13	.07160	R	13
ICE HARBOR	1972	2012	46	46	.07160	R	46
ICE HARBOR	1972	2012	1	1	.07160	R	1
ICE HARBOR	1986	2012	137	137	.07160		137
HILLS CREEK	1973	2012	13	13	.07160	R	13
ICE HARBOR	1973	2012	46	46	.07160	R	46
ICE HARBOR	1973	2012	1	1	.07160	R	1
HILLS CREEK	1974	2012	13	13	.07160	R	13
ICE HARBOR	1974	2012	46	46	.07160	R	46
ICE HARBOR	1974	2012	1	1	.07160	R	1
HILLS CREEK	1975	2012	13	13	.07160	R	13
ICE HARBOR	1985	2012	41	41	.07160		41
ICE HARBOR	1975	2012	46	46	.07160	R	46
ICE HARBOR	1975	2012	1	1	.07160	R	1
HILLS CREEK	1976	2012	13	13	.07160	R	13
ICE HARBOR	1976	2012	46	46	.07160	R	46
ICE HARBOR	1976	2012	228	228	.07150	R	228
ICE HARBOR	1982	2012	1	1	.07160	R	1

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	ICE HARBOR	1982	2012	46	46	.07160	R	46
	ICE HARBOR	1976	2012	1	1	.07160	R	1
	HILLS CREEK	1982	2012	13	13	.07160	R	13
	HILLS CREEK	1977	2012	13	13	.07160	R	13
	ICE HARBOR	1977	2012	46	46	.07160	R	46
	ICE HARBOR	1977	2012	1	1	.07160	R	1
	HILLS CREEK	1978	2012	13	13	.07160	R	13
	ICE HARBOR	1978	2012	46	46	.07160	R	46
	ICE HARBOR	1978	2012	1	1	.07160	R	1
	HILLS CREEK	1979	2012	13	13	.07160	R	13
	ICE HARBOR	1979	2012	46	46	.07160	R	46
	ICE HARBOR	1979	2012	1	1	.07160	R	1
	HILLS CREEK	1980	2012	13	13	.07160	R	13
	ICE HARBOR	1980	2012	46	46	.07160	R	46
	ICE HARBOR	1980	2012	1	1	.07160	R	1
	HILLS CREEK	1985	2012	6	6	.07160		6
	HILLS CREEK	1981	2012	13	13	.07160	R	13
	ICE HARBOR	1981	2012	46	46	.07160	R	46
	ICE HARBOR	1981	2012	1	1	.07160	R	1
	LOWER MONUMENTAL	1970	2020	51,218	42,785	.07250		40,194

	TOTAL							96,041
2013	BPA CONSERVATION	1998	2013	52,800	52,800	.05600		52,800
	FISH, WILDLIFE & ENVIRONMENTAL	1998	2013	60,000	60,000	.06100		60,000
	MINIDOKA	2003	2013	80	80	.05750		80
	BOISE	2003	2013	27	27	.05750		27
	BPA CONSERVATION	1993	2013	40,000	40,000	.06750		40,000
	LOWER MONUMENTAL	1970	2020	51,218	2,591	.07250		2,591
	LITTLE GOOSE	1970	2020	21,301	21,301	.07250		21,301
	JOHN DAY	1970	2020	23,656	23,656	.07250		23,656
	LOWER MONUMENTAL	1987	2020	3	3	.07250		3
	COUGAR	1981	2014	20	20	.07230	R	20
	COUGAR	1980	2014	20	20	.07230	R	20
	COUGAR	1979	2014	20	20	.07230	R	20
	COUGAR	1982	2014	20	20	.07230	R	20
	COUGAR	1978	2014	20	20	.07230	R	20
	COUGAR	1977	2014	20	20	.07230	R	20
	COUGAR	1985	2014	1	1	.07230		1
	COUGAR	1976	2014	20	20	.07230	R	20

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

+	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
	COUGAR	1986	2014	104	104	.07230		104
	COUGAR	1975	2014	20	20	.07230	R	20
	COUGAR	1974	2014	19	19	.07230	R	19
	COUGAR	1973	2014	20	20	.07230	R	20
	COUGAR	1972	2014	20	20	.07230	R	20
	COUGAR	1983	2014	20	20	.07230	R	20
	COUGAR	1971	2014	20	20	.07230	R	20
	COUGAR	1970	2014	20	20	.07230	R	20
	COUGAR	1969	2014	20	20	.07230	R	20
	COUGAR	1968	2014	20	20	.07230	R	20
	COUGAR	1967	2014	20	20	.07230	R	20
	COUGAR	1966	2014	20	20	.07230	R	20
	COUGAR	1965	2014	20	20	.07230	R	20
	COUGAR	1964	2014	9,042	9,042	.07230		9,042
	COUGAR	1987	2014	45	45	.07230		45
	DWORSHAK	1996	2021	26	26	.07230		26
	LITTLE GOOSE	1986	2021	239	239	.07230		239
	LITTLE GOOSE	1980	2021	28	28	.07230	R	28
	LITTLE GOOSE	1979	2021	29	29	.07230	R	29
	LITTLE GOOSE	1978	2021	28	28	.07230	R	28
	DWORSHAK	1996	2021	184	184	.07230		184
	LITTLE GOOSE	1977	2021	29	29	.07230	R	29
	LITTLE GOOSE	1976	2021	28	28	.07230	R	28
	LOWER MONUMENTAL	1996	2021	37	37	.07230		37
	LITTLE GOOSE	1982	2021	28	28	.07230	R	28
	LITTLE GOOSE	1975	2021	29	29	.07230	R	29
	LITTLE GOOSE	1974	2021	28	28	.07230	R	28
	LITTLE GOOSE	1973	2021	29	29	.07230	R	29
	LITTLE GOOSE	1972	2021	28	28	.07230	R	28
	LITTLE GOOSE	1971	2021	42,962	42,962	.07230		42,962
	JOHN DAY	1971	2021	34,974	34,974	.07230		34,974
	LITTLE GOOSE	1981	2021	29	29	.07230	R	29
	LITTLE GOOSE	1983	2021	29	29	.07230	R	29
	LOWER MONUMENTAL	1996	2021	51	51	.07230		51
	LITTLE GOOSE	1985	2021	174	174	.07230		174
	LITTLE GOOSE	1987	2021	6	6	.07230		6
	BONNEVILLE	1997	2022	122	122	.07230		122
	ICE HARBOR	1997	2022	66	66	.07230		66
	JOHN DAY	1997	2022	133	133	.07230		133

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LIBBY	1997	2022	432	432	.07230		432
	JOHN DAY	1989	2022	30	30	.07210		30
	YAKIMA-CHANDLER	1986	2022	455	455	.07210		455
	JOHN DAY	1972	2022	11,502	11,502	.07210		8,499
	TOTAL							298,761
2014	FISH, WILDLIFE & ENVIRONMENTAL	1999	2014	27,000	27,000	.07310		27,000
	MINIDOKA	2004	2014	80	80	.05730		80
	BOISE	2004	2014	27	27	.05730		27
	BPA CONSERVATION	1994	2014	50,000	50,000	.06750		50,000
	JOHN DAY	1972	2022	11,502	3,003	.07210		3,003
	JOHN DAY	1985	2022	6,490	6,490	.07210		6,490
	JOHN DAY	1987	2022	706	706	.07210		706
	YAKIMA-CHANDLER	1961	2022	1	1	.07210	R	1
	YAKIMA-CHANDLER	1960	2022	1	1	.07210	R	1
	JOHN DAY	1992	2022	19	19	.07210		19
	YAKIMA-CHANDLER	1959	2022	1	1	.07210	R	1
	JOHN DAY	1990	2022	37	37	.07210		37
	YAKIMA-CHANDLER	1956	2022	216	216	.07210		216
	YAKIMA-CHANDLER	1956	2022	193	193	.07210		193
	JOHN DAY	1986	2022	3,227	3,227	.07210		3,227
	DWORSHAK	1979	2023	3	3	.07190	R	3
	DWORSHAK	1979	2023	518	518	.07190	R	518
	DWORSHAK	1985	2023	1,141	1,141	.07190		1,141
	DWORSHAK	1978	2023	3	3	.07190	R	3
	DWORSHAK	1978	2023	518	518	.07190	R	518
	DWORSHAK	1981	2023	518	518	.07190	R	518
	DWORSHAK	1982	2023	518	518	.07190	R	518
	DWORSHAK	1982	2023	3	3	.07190	R	3
	DWORSHAK	1977	2023	3	3	.07190	R	3
	DWORSHAK	1977	2023	518	518	.07190	R	518
	DWORSHAK	1980	2023	3	3	.07190	R	3
	DWORSHAK	1976	2023	3	3	.07190	R	3
	DWORSHAK	1976	2023	518	518	.07190	R	518
	DWORSHAK	1975	2023	3	3	.07190	R	3
	DWORSHAK	1975	2023	518	518	.07190	R	518
	DWORSHAK	1986	2023	197	197	.07190		197
	DWORSHAK	1980	2023	518	518	.07190	R	518
	DWORSHAK	1974	2023	3	3	.07190	R	3

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	DWORSHAK	1974	2023	515	515	.07190	R	515
	THE DALLES	1973	2023	21,983	21,983	.07190		21,983
	DWORSHAK	1973	2023	803	803	.07190		803
	DWORSHAK	1973	2023	132,996	132,996	.07190		132,996
	DWORSHAK	1983	2023	523	523	.07190	R	523
	DWORSHAK	1983	2023	3	3	.07190	R	3
	DWORSHAK	1987	2023	5	5	.07190		5
	DWORSHAK	1981	2023	3	3	.07190	R	3
	THE DALLES	1974	2024	7,268	7,268	.07170		7,268
	LOWER GRANITE	1978	2025	510	510	.07160	R	510
	LOWER GRANITE	1977	2025	510	510	.07160	R	510
	LOWER GRANITE	1995	2025	96	96	.07160		96
	LOWER GRANITE	1979	2025	510	510	.07160	R	510
	LOWER GRANITE	1976	2025	510	510	.07160	R	510
	LOWER GRANITE	1975	2025	117,645	117,645	.07160		55,142

	TOTAL							317,884
2015	FISH, WILDLIFE & ENVIRONMENTAL	2000	2015	27,000	27,000	.07240		27,000
	MINIDOKA	2005	2015	80	80	.05670		80
	BOISE	2005	2015	27	27	.05670		27
	BPA CONSERVATION	1995	2015	85,000	85,000	.07500		85,000
	BUREAU DIRECT FUND	1995	2015	35,000	35,000	.07500		35,000
	LOWER GRANITE	1975	2025	117,645	62,503	.07160		62,503
	LIBBY	1975	2025	48,138	48,138	.07160		48,138
	LOWER GRANITE	1982	2025	510	510	.07160	R	510
	COLUMBIA BASIN - 3RD PWR HOUSE	1975	2025	7,435	7,435	.07160		7,435
	COLUMBIA BASIN - 3RD PWR HOUSE	1975	2025	36,690	36,690	.07160		36,690
	LOWER GRANITE	1986	2025	215	215	.07160		215
	LOWER GRANITE	1980	2025	510	510	.07160	R	510
	LOWER GRANITE	1981	2025	510	510	.07160	R	510
	LOWER GRANITE	1983	2025	510	510	.07160	R	510
	LOWER GRANITE	1987	2025	8	8	.07160		8
	LOWER GRANITE	1985	2025	328	328	.07160		328
	LIBBY	1978	2026	1,465	1,465	.07150	R	1,465
	MCNARY	1996	2026	277	277	.07150		277
	LIBBY	1989	2026	1	1	.07150		1
	LIBBY	1977	2026	1,465	1,465	.07150	R	1,465
	LIBBY	1976	2026	153,432	153,432	.07150		23,389

	TOTAL							331,061

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2016	FISH, WILDLIFE & ENVIRONMENTAL	2001	2016	27,000	27,000	.06920		27,000
	MINIDOKA	2006	2016	80	80	.05610		80
	BOISE	2006	2016	27	27	.05610		27
	BONNEVILLE	2011	2016	72,812	72,812	.05488	R	72,812
	LIBBY	1976	2026	153,432	130,043	.07150		130,043
	LIBBY	1982	2026	1,465	1,465	.07150	R	1,465
	ICE HARBOR	1976	2026	20,472	20,472	.07150		20,472
	LIBBY	1979	2026	1,465	1,465	.07150	R	1,465
	COLUMBIA BASIN - 3RD PWR HOUSE	1976	2026	8,037	8,037	.07150		8,037
	COLUMBIA BASIN - 3RD PWR HOUSE	1976	2026	41,330	41,330	.07150		41,330
	MCNARY	1996	2026	74	74	.07150		74
	LIBBY	1981	2026	1,465	1,465	.07150	R	1,465
	LIBBY	1983	2026	1,465	1,465	.07150	R	1,465
	ICE HARBOR	1985	2026	21	21	.07150		21
	LIBBY	1980	2026	1,465	1,465	.07150	R	1,465
	LIBBY	1985	2026	518	518	.07150		518
	COLUMBIA BASIN	1996	2026	76	76	.07150		76
	LIBBY	1987	2026	2	2	.07150		2
	LIBBY	1986	2026	283	283	.07150		283
	LOST CREEK	1978	2027	58	58	.07150	R	58
	LOST CREEK	1986	2027	6	6	.07150		6
	LOST CREEK	1977	2027	13,413	13,413	.07150		13,413
	LOST CREEK	1979	2027	60	60	.07150	R	60
	COLUMBIA BASIN - 3RD PWR HOUSE	1977	2027	7,964	7,964	.07150		7,964
	COLUMBIA BASIN - 3RD PWR HOUSE	1977	2027	42,764	42,764	.07150		16,008

	TOTAL							345,609
2017	FISH, WILDLIFE & ENVIRONMENTAL	2002	2017	34,732	34,732	.06690		34,732
	BPA CONSERVATION	1996	2017	40,000	40,000	.07200		40,000
	ICE HARBOR	2012	2017	15,363	15,363	.05488	R	15,363
	COLUMBIA BASIN - 3RD PWR HOUSE	1977	2027	42,764	26,756	.07150		26,756
	CHIEF JOSEPH	1977	2027	30,512	30,512	.07150		30,512
	BONNEVILLE	1977	2027	15,670	15,670	.07150		15,670
	LOST CREEK	1982	2027	60	60	.07150	R	60
	LOST CREEK	1981	2027	60	60	.07150	R	60
	LOST CREEK	1980	2027	60	60	.07150	R	60
	LOST CREEK	1985	2027	12	12	.07150		12
	LOST CREEK	1983	2027	60	60	.07150	R	60

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOST CREEK	1987	2027	4	4	.07150		4
	LITTLE GOOSE	1978	2028	49,578	49,578	.07150		49,578
	COLUMBIA BASIN - 3RD PWR HOUSE	1978	2028	7,896	7,896	.07150		7,896
	COLUMBIA BASIN - 3RD PWR HOUSE	1978	2028	42,399	42,399	.07150		42,399
	CHIEF JOSEPH	1978	2028	75,669	75,669	.07150		75,669
	LOWER GRANITE	1978	2028	40,611	40,611	.07150		40,611
	LITTLE GOOSE	1985	2028	47	47	.07150		47
	CHIEF JOSEPH	1986	2029	5,363	5,363	.07150		5,363
	CHIEF JOSEPH	1979	2029	60,079	60,079	.07150		56,863

	TOTAL							441,715
2018	FISH, WILDLIFE & ENVIRONMENTAL	2003	2018	38,317	38,317	.06500		38,317
	LOWER SNAKE F AND W	2013	2018	54	54	.05488	R	54
	MCNARY	2011	2018	32	32	.05554	R	32
	LOWER SNAKE F AND W	2011	2018	642	642	.05554	R	642
	LOWER MONUMENTAL	2011	2018	26	26	.05554	R	26
	LOOKOUT POINT-DEXTER	2011	2018	17	17	.05554	R	17
	LIBBY	2011	2018	77	77	.05554	R	77
	ICE HARBOR	2011	2018	29,048	29,048	.05554	R	29,048
	BONNEVILLE	2011	2018	30,984	30,984	.05554	R	30,984
	CHIEF JOSEPH	1979	2029	60,079	3,216	.07150		3,216
	LOWER MONUMENTAL	1979	2029	40,669	40,669	.07150		40,669
	CHIEF JOSEPH	1989	2029	2,227	2,227	.07150		2,227
	CHIEF JOSEPH	1990	2029	4,505	4,505	.07150		4,505
	CHIEF JOSEPH	1985	2029	16,372	16,372	.07150		16,372
	LOWER GRANITE	1994	2029	1,551	1,551	.07150		1,551
	CHIEF JOSEPH	1988	2029	2,722	2,722	.07150		2,722
	LIBBY	1994	2029	152	152	.07150		152
	COLUMBIA BASIN - 3RD PWR HOUSE	1979	2029	15,666	15,666	.07150		15,666
	CHIEF JOSEPH	1987	2029	3,036	3,036	.07150		3,036
	LOWER MONUMENTAL	1985	2029	256	256	.07150		256
	COLUMBIA BASIN - 3RD PWR HOUSE	1979	2029	84,118	84,118	.07150		84,118
	HUNGRY HORSE	1995	2030	536	536	.07150	R	536
	COLUMBIA BASIN	1995	2030	25	25	.07150		25
	LIBBY	1995	2030	15	15	.07150	R	15
	DWORSHAK	1995	2030	218	218	.07150		218
	HUNGRY HORSE	1995	2030	1,195	1,195	.07150	R	1,195
	LIBBY	1995	2030	94	94	.07150	R	94
	LIBBY	1995	2030	41	41	.07150		41

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
	--------INVESTMENT PAID-------- (ALL AMOUNT IN $1000)							
+								
	BONNEVILLE - 2ND POWER HOUSE	1981	2031	455	455	.07150		455
	DWORSHAK	1996	2031	6	6	.07150		6
	DWORSHAK	1996	2031	203	203	.07150		203
	BONNEVILLE - 2ND POWER HOUSE	1981	2031	40,964	40,964	.07150		40,964
	ICE HARBOR	1996	2031	78	78	.07150		78
	LOWER GRANITE	1996	2031	206	206	.07150		206
	BONNEVILLE	1996	2031	22	22	.07150		22
	LOST CREEK	1996	2031	31	31	.07150		31
	CHIEF JOSEPH	1996	2031	27	27	.07150	R	27
	COLUMBIA BASIN	1996	2031	109	109	.07150		109
	COLUMBIA BASIN	1996	2031	251	251	.07150		251
	BONNEVILLE - 2ND POWER HOUSE	1982	2032	203,535	203,535	.07150		203,535
	BONNEVILLE - 2ND POWER HOUSE	1982	2032	2,264	2,264	.07150		2,264
	BONNEVILLE	1997	2032	518	518	.07150		518
	CHIEF JOSEPH	1997	2032	166	166	.07150		166
	MCNARY	1997	2032	30	30	.07150		30
	BONNEVILLE - 2ND POWER HOUSE	1986	2033	30,578	30,578	.07150		30,578
	COLUMBIA BASIN - 3RD PWR HOUSE	1986	2033	15,538	15,538	.07150		15,538
	COLUMBIA BASIN - 3RD PWR HOUSE	1986	2033	1,851	1,851	.07150		1,851
	COLUMBIA BASIN - 3RD PWR HOUSE	1989	2033	10,902	10,902	.07150		10,902
	COLUMBIA BASIN - 3RD PWR HOUSE	1985	2033	2,060	2,060	.07150		2,060
	COLUMBIA BASIN - 3RD PWR HOUSE	1985	2033	107	107	.07150		107
	BONNEVILLE - 2ND POWER HOUSE	1989	2033	1,232	1,232	.07150		1,232
	COLUMBIA BASIN - 3RD PWR HOUSE	1985	2033	41,772	41,772	.07150		41,772
	BONNEVILLE - 2ND POWER HOUSE	1983	2033	62,409	62,409	.07150		33,114

	TOTAL							661,830
2019	FISH, WILDLIFE & ENVIRONMENTAL	2004	2019	35,825	35,825	.06480		35,825
	THE DALLES	2014	2019	49	49	.05488	R	49
	BPA CONSERVATION	1999	2019	6,000	6,000	.07470		6,000
	MCNARY	2011	2019	67	67	.05571	R	67
	JOHN DAY	2012	2019	31	31	.05554	R	31
	LOOKOUT POINT-DEXTER	2011	2019	6	6	.05571	R	6
	LITTLE GOOSE	2011	2019	45	45	.05571	R	45
	LOWER MONUMENTAL	1999	2019	492	492	.06650		492
	COLUMBIA BASIN	1999	2019	312	312	.06650		312
	BONNEVILLE - 2ND POWER HOUSE	1983	2033	62,409	29,295	.07150		29,295
	BONNEVILLE - 2ND POWER HOUSE	1983	2033	694	694	.07150		694
	COLUMBIA BASIN - 3RD PWR HOUSE	1983	2033	712	712	.07150		712

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

+

PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
COLUMBIA BASIN - 3RD PWR HOUSE	1983	2033	13,003	13,003	.07150		13,003
BONNEVILLE - 2ND POWER HOUSE	1987	2033	2,801	2,801	.07150		2,801
BONNEVILLE - 2ND POWER HOUSE	1985	2033	9,138	9,138	.07150		9,138
COLUMBIA BASIN - 3RD PWR HOUSE	1988	2033	2,294	2,294	.07150		2,294
COLUMBIA BASIN - 3RD PWR HOUSE	1988	2033	4,351	4,351	.07150		4,351
BONNEVILLE - 2ND POWER HOUSE	1988	2033	1,271	1,271	.07150		1,271
LOWER SNAKE F AND W	1983	2033	9,967	9,967	.07150		9,967
COLUMBIA BASIN - 3RD PWR HOUSE	1990	2033	6,383	6,383	.07150		6,383
COLUMBIA BASIN - 3RD PWR HOUSE	1984	2033	16,965	16,965	.07150		16,965
COLUMBIA BASIN - 3RD PWR HOUSE	1984	2033	13,192	13,192	.07150		13,192
COLUMBIA BASIN - 3RD PWR HOUSE	1984	2033	3,160	3,160	.07150		3,160
BONNEVILLE - 2ND POWER HOUSE	1990	2033	1,588	1,588	.07150		1,588
COLUMBIA BASIN - 3RD PWR HOUSE	1987	2033	14,439	14,439	.07150		14,439
COLUMBIA BASIN - 3RD PWR HOUSE	1987	2033	1,730	1,730	.07150		1,730
JOHN DAY	1995	2035	52	52	.07150		52
LOWER SNAKE F AND W	1985	2035	47,921	47,921	.07150		47,921
JOHN DAY	1995	2035	22	22	.07150		22
JOHN DAY	1995	2035	121	121	.07150		121
LOWER MONUMENTAL	1996	2036	264	264	.07150	R	264
LOWER SNAKE F AND W	1987	2037	72,536	72,536	.07150		72,536
LOWER SNAKE F AND W	1988	2038	805	805	.07150		805
LIBBY	1988	2038	14,781	14,781	.07150		14,781
LITTLE GOOSE	1995	2040	17	17	.07150		17
LITTLE GOOSE	1995	2040	733	733	.07150	R	733
LITTLE GOOSE	1995	2040	450	450	.07150		450
LOWER SNAKE F AND W	1990	2040	1,557	1,557	.07150		1,557
ICE HARBOR	1996	2041	371	371	.07150	R	371
LOWER SNAKE F AND W	1991	2041	4,411	4,411	.07150		4,411
LOWER SNAKE F AND W	1993	2043	71,632	71,632	.07150		71,632
LOWER SNAKE F AND W	1994	2044	4,619	4,619	.07150		4,619
COLUMBIA BASIN - 3RD PWR HOUSE	1994	2044	12,631	12,631	.07150		12,631
CHIEF JOSEPH	1994	2044	4,017	4,017	.07150		4,017
BONNEVILLE - 2ND POWER HOUSE	1994	2044	5,700	5,700	.07150		5,700
BONNEVILLE - 2ND POWER HOUSE	1995	2045	3,791	3,791	.07150		3,791
LOWER MONUMENTAL	1995	2045	41	41	.07150		41
LOWER MONUMENTAL	1995	2045	99	99	.07150		99
ALBENI FALLS	1995	2045	1,105	1,105	.07150		475
TOTAL							420,856

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
	---INVESTMENT PAID--- (ALL AMOUNT IN $1000)							
+								
2020	FISH, WILDLIFE & ENVIRONMENTAL	2005	2020	33,988	33,988	.06440		33,988
	BPA CONSERVATION	2000	2020	1,000	1,000	.07400		1,000
	COUGAR	2012	2020	4	4	.05571	R	4
	LITTLE GOOSE	2013	2020	26	26	.05554	R	26
	COUGAR	2013	2020	3	3	.05554	R	3
	ALBENI FALLS	1995	2045	1,105	630	.07150		630
	LOWER MONUMENTAL	1995	2045	624	624	.07150		624
	JOHN DAY	1995	2045	37	37	.07150		37
	LOWER MONUMENTAL	1995	2045	1,122	1,122	.07150	R	1,122
	CHIEF JOSEPH	1995	2045	784	784	.07150		784
	DETROIT-BIG CLIFF	1995	2045	38	38	.07150		38
	COLUMBIA RIVER FISH MITIGATION	1995	2045	703	703	.07150		703
	BONNEVILLE	1995	2045	243	243	.07150		243
	ALBENI FALLS	1995	2045	531	531	.07150		531
	LOWER SNAKE F AND W	1995	2045	2,162	2,162	.07150		2,162
	MCNARY	1995	2045	16	16	.07150		16
	JOHN DAY	1995	2045	7,653	7,653	.07150	R	7,653
	BONNEVILLE	1995	2045	410	410	.07150	R	410
	ALBENI FALLS	1995	2045	443	443	.07150		443
	COLUMBIA BASIN	1995	2045	292	292	.07150	R	292
	DWORSHAK	1995	2045	1,162	1,162	.07150		1,162
	LOOKOUT POINT-DEXTER	1995	2045	39	39	.07150		39
	JOHN DAY	1995	2045	608	608	.07150		608
	HUNGRY HORSE	1995	2045	6,190	6,190	.07150		6,190
	COLUMBIA BASIN	1995	2045	2,453	2,453	.07150		2,453
	BONNEVILLE	1995	2045	440	440	.07150	R	440
	CHIEF JOSEPH	1995	2045	562	562	.07150		562
	LOST CREEK	1995	2045	94	94	.07150		94
	CHIEF JOSEPH	1995	2045	147	147	.07150		147
	CHIEF JOSEPH	1995	2045	712	712	.07150	R	712
	LOOKOUT POINT-DEXTER	1995	2045	33	33	.07150		33
	HUNGRY HORSE	1996	2046	15	15	.07150		15
	GREEN PETER-FOSTER	1996	2046	26	26	.07150		26
	HUNGRY HORSE	1996	2046	2	2	.07150		2
	DWORSHAK	1996	2046	3	3	.07150		3
	LITTLE GOOSE	1996	2046	10	10	.07150		10
	DWORSHAK	1996	2046	4	4	.07150		4
	BOISE	1996	2046	450	450	.07150		450
	LITTLE GOOSE	1996	2046	10	10	.07150	R	10

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR --------------------INVESTMENT PAID--------------------

(ALL AMOUNT IN $1000)

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PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
LITTLE GOOSE	1996	2046	211	211	.07150		211
BOISE	1996	2046	656	656	.07150		656
BONNEVILLE - 2ND POWER HOUSE	1996	2046	376	376	.07150		376
BONNEVILLE	1996	2046	18	18	.07150		18
LOWER MONUMENTAL	1996	2046	10	10	.07150		10
LOWER GRANITE	1996	2046	625	625	.07150		625
LITTLE GOOSE	1996	2046	241	241	.07150		241
BONNEVILLE	1996	2046	18	18	.07150		18
LITTLE GOOSE	1996	2046	520	520	.07150	R	520
LOWER SNAKE F AND W	1996	2046	10,185	10,185	.07150		10,185
LITTLE GOOSE	1996	2046	3,909	3,909	.07150	R	3,909
BONNEVILLE	1996	2046	80	80	.07150		80
BONNEVILLE	1996	2046	109	109	.07150		109
LOST CREEK	1996	2046	24	24	.07150		24
BONNEVILLE	1996	2046	142	142	.07150		142
BONNEVILLE	1996	2046	223	223	.07150		223
MCNARY	1996	2046	619	619	.07150		619
BONNEVILLE	1996	2046	751	751	.07150		751
THE DALLES	1996	2046	1,991	1,991	.07150		1,991
LOWER GRANITE	1996	2046	9	9	.07150	R	9
HILLS CREEK	1996	2046	28	28	.07150		28
BONNEVILLE	1996	2046	1,322	1,322	.07150	R	1,322
CHIEF JOSEPH	1996	2046	3	3	.07150	R	3
CHIEF JOSEPH	1996	2046	4	4	.07150	R	4
CHIEF JOSEPH	1996	2046	355	355	.07150		355
CHIEF JOSEPH	1996	2046	729	729	.07150		729
COLUMBIA BASIN	1996	2046	426	426	.07150		426
DWORSHAK	1996	2046	46	46	.07150		46
COLUMBIA RIVER FISH MITIGATION	1996	2046	42,357	42,357	.07150		42,357
COLUMBIA BASIN	1996	2046	368	368	.07150		368
BONNEVILLE	1997	2047	161	161	.07150		161
CHIEF JOSEPH	1997	2047	657	657	.07150		657
COLUMBIA BASIN	1997	2047	3,393	3,393	.07150		3,393
COUGAR	1997	2047	26	26	.07150		26
DWORSHAK	1997	2047	7,588	7,588	.07150		7,588
HUNGRY HORSE	1997	2047	216	216	.07150		216
ALBENI FALLS	1997	2047	477	477	.07150		477
ICE HARBOR	1997	2047	67	67	.07150		67
JOHN DAY	1997	2047	179	179	.07150		179

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	MINIDOKA	1997	2047	51,558	51,558	.07150		51,558
	LIBBY	1997	2047	660	660	.07150		660
	LITTLE GOOSE	1997	2047	1	1	.07150		1
	LOWER GRANITE	1997	2047	677	677	.07150		677
	LOWER SNAKE F AND W	1997	2047	2,173	2,173	.07150		2,173
	BOISE	1997	2047	2,284	2,284	.07150		2,284
	BPA PROGRAM	2001	2046	7,600	7,600	.07290		7,600
	BUREAU DIRECT FUND	2001	2046	76,100	76,100	.07290		76,100
	BUREAU DIRECT FUND	2002	2047	89,855	89,855	.07080		89,855
	BPA PROGRAM	2002	2047	2,100	2,100	.07080		2,100
	BPA CONSERVATION	2001	2021	1,000	1,000	.07110		1,000
	BPA PROGRAM	2004	2049	1,400	1,400	.06900		1,400
	BUREAU DIRECT FUND	2004	2049	61,700	61,700	.06900		61,700
	BUREAU DIRECT FUND	2003	2048	86,650	86,650	.06890		28,249

	TOTAL							468,145
2021	FISH, WILDLIFE & ENVIRONMENTAL	2006	2021	34,182	34,182	.06380		34,182
	DWORSHAK	2013	2021	43	43	.05571	R	43
	LITTLE GOOSE	2011	2021	13	13	.05607	R	13
	BONNEVILLE	2013	2021	4,519	4,519	.05571	R	4,519
	BONNEVILLE	2016	2021	72,812	72,812	.05488	R	72,812
	BONNEVILLE	2011	2021	127	127	.05607	R	127
	BUREAU DIRECT FUND	2003	2048	86,650	58,401	.06890		58,401
	BPA PROGRAM	2003	2048	1,400	1,400	.06890		1,400
	BPA PROGRAM	2005	2050	1,400	1,400	.06880		1,400
	BUREAU DIRECT FUND	2005	2050	62,100	62,100	.06880		62,100
	LOWER GRANITE	1999	2049	1,191	1,191	.06720		1,191
	JOHN DAY	1999	2049	16,673	16,673	.06720		16,673
	MCNARY	1999	2049	1,228	1,228	.06720		1,228
	BONNEVILLE	1999	2049	35,640	35,640	.06720		35,640
	LOWER SNAKE F AND W	1999	2049	5,368	5,368	.06720		5,368
	BPA PROGRAM	2006	2051	1,400	1,400	.06850		1,400
	BUREAU DIRECT FUND	2006	2051	62,100	62,100	.06850		62,100
	ICE HARBOR	1999	2024	657	657	.06680		657
	COLUMBIA BASIN	1999	2024	696	696	.06680		696
	LITTLE GOOSE	1999	2024	825	825	.06680		825
	COLUMBIA BASIN	2000	2050	1,185	1,185	.06640		1,185
	BONNEVILLE	2000	2050	17,820	17,820	.06640		17,820
	COLUMBIA BASIN	2000	2050	782	782	.06640		782

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	COLUMBIA RIVER FISH MITIGATION	2000	2050	18,185	18,185	.06640		18,185
	LOWER SNAKE F AND W	2000	2050	771	771	.06390		771
	BONNEVILLE	2001	2051	17,820	17,820	.06390		17,820
	COLUMBIA BASIN	2001	2051	3,557	3,557	.06390		3,557
	COLUMBIA BASIN	2001	2051	1,163	1,163	.06390		1,163
	THE DALLES	2001	2051	12,528	12,528	.06390		12,528
	COLUMBIA RIVER FISH MITIGATION	2001	2051	339,430	339,430	.06180		87,792
	TOTAL							522,378
2022	THE DALLES	2015	2022	53	53	.05554	R	53
	ICE HARBOR	2012	2022	14,976	14,976	.05607	R	14,976
	DWORSHAK	2015	2022	19	19	.05554	R	19
	ICE HARBOR	2017	2022	15,363	15,363	.05488	R	15,363
	COLUMBIA RIVER FISH MITIGATION	2001	2051	339,430	251,638	.06180		251,638
	BONNEVILLE	2002	2052	8,910	8,910	.06180		8,910
	COLUMBIA BASIN	2002	2052	1,162	1,162	.06180		1,162
	COLUMBIA RIVER FISH MITIGATION	2002	2052	111,042	111,042	.06180		111,042
	LOWER SNAKE F AND W	2002	2052	794	794	.06180		794
	THE DALLES	2002	2052	12,528	12,528	.06180		12,528
	COLUMBIA BASIN	2002	2027	507	507	.06120		507
	COLUMBIA BASIN	2004	2054	1,162	1,162	.06000		1,162
	COLUMBIA RIVER FISH MITIGATION	2004	2054	213,203	213,203	.06000		135,487
	TOTAL							553,641
2023	LOWER SNAKE F AND W	2013	2023	1,168	1,168	.05607	R	1,168
	LOWER SNAKE F AND W	2015	2023	123	123	.05571	R	123
	THE DALLES	2015	2023	80	80	.05571	R	80
	LOWER GRANITE	2011	2023	23	23	.05641	R	23
	DWORSHAK	2013	2023	207	207	.05607	R	207
	GREEN PETER-FOSTER	2016	2023	19	19	.05554	R	19
	LOWER SNAKE F AND W	2018	2023	54	54	.05488	R	54
	LOWER GRANITE	2015	2023	36	36	.05571	R	36
	GREEN PETER-FOSTER	2015	2023	15	15	.05571	R	15
	COLUMBIA RIVER FISH MITIGATION	2004	2054	213,203	77,716	.06000		77,716
	MCNARY	2004	2054	7,000	7,000	.06000		7,000
	THE DALLES	2004	2054	12,528	12,528	.06000		12,528
	LOWER SNAKE F AND W	2001	2051	410	410	.05990		410
	BONNEVILLE	2003	2053	22,216	22,216	.05990		22,216
	COLUMBIA BASIN	2003	2053	1,161	1,161	.05990		1,161

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	COLUMBIA RIVER FISH MITIGATION	2003	2053	44,682	44,682	.05990		44,682
	THE DALLES	2003	2053	12,528	12,528	.05990		12,528
	COLUMBIA BASIN	2005	2055	1,162	1,162	.05980		1,162
	COLUMBIA RIVER FISH MITIGATION	2005	2055	91,203	91,203	.05980		91,203
	MCNARY	2005	2055	17,000	17,000	.05980		17,000
	THE DALLES	2005	2055	12,528	12,528	.05980		12,528
	THE DALLES	2006	2056	12,528	12,528	.05950		12,528
	COLUMBIA BASIN	2006	2056	1,162	1,162	.05950		1,162
	MCNARY	2006	2056	17,000	17,000	.05950		17,000
	COLUMBIA RIVER FISH MITIGATION	2006	2056	125,913	125,913	.05950		125,913
	HUNGRY HORSE	2013	2043	534	534	.05949	R	534
	LOWER SNAKE F AND W	2013	2043	2,493	2,493	.05949	R	2,493
	DETROIT-BIG CLIFF	2014	2044	698	698	.05949	R	698
	ICE HARBOR	2011	2046	7,271	7,271	.05949	R	7,271
	BONNEVILLE	2011	2046	82,824	82,824	.05949	R	82,824
	LIBBY	2011	2046	11,804	11,804	.05949	R	11,804
	YAKIMA-CHANDLER	2016	2046	68	68	.05949	R	68
	BOISE	2017	2047	74	74	.05949	R	74
	BONNEVILLE	2012	2047	17	17	.05949	R	17
	LOST CREEK	2012	2047	19	19	.05949	R	19
	MINIDOKA	2017	2047	99	99	.05949	R	99
	CHIEF JOSEPH	2013	2048	78,501	78,501	.05949	R	19,282
	TOTAL							583,645
2024	THE DALLES	2019	2024	49	49	.05488	R	49
	DETROIT-BIG CLIFF	2017	2024	3	3	.05554	R	3
	LOWER GRANITE	2017	2024	27	27	.05554	R	27
	DETROIT-BIG CLIFF	2014	2024	36	36	.05607	R	36
	CHIEF JOSEPH	2013	2048	78,501	59,219	.05949	R	59,219
	LITTLE GOOSE	2013	2048	11,039	11,039	.05949	R	11,039
	LOWER GRANITE	2013	2048	11,223	11,223	.05949	R	11,223
	COLUMBIA BASIN	2013	2048	61,863	61,863	.05949	R	61,863
	YAKIMA-ROZA	2018	2048	5	5	.05949	R	5
	LOWER MONUMENTAL	2014	2049	10,664	10,664	.05949	R	10,664
	LITTLE GOOSE	2011	2051	11,872	11,872	.05949	R	11,872
	BONNEVILLE	2017	2052	79,089	79,089	.05949	R	79,089
	ICE HARBOR	2022	2052	407	407	.05949	R	407
	COLUMBIA BASIN	2017	2052	44,684	44,684	.05949	R	44,684
	HILLS CREEK	2022	2052	389	389	.05949	R	389

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOWER SNAKE F AND W	2018	2053	1,282	1,282	.05949	R	1,282
	DWORSHAK	2013	2053	8,674	8,674	.05949	R	8,674
	LOWER GRANITE	2015	2055	7,947	7,947	.05949	R	7,947
	LIBBY	2020	2055	8,798	8,798	.05949	R	8,798
	ICE HARBOR	2016	2056	4,879	4,879	.05949	R	4,879
	LIBBY	2016	2056	17,632	17,632	.05949	R	17,632
	LOST CREEK	2017	2057	1,745	1,745	.05949	R	1,745
	GREEN PETER-FOSTER	2012	2057	2,235	2,235	.05949	R	2,235
	MINIDOKA	2022	2057	3,475	3,475	.05949	R	3,475
	GREEN PETER-FOSTER	2013	2058	1,921	1,921	.05949	R	1,921
	CHIEF JOSEPH	2018	2058	50,163	50,163	.05949	R	50,163
	LITTLE GOOSE	2018	2058	9,899	9,899	.05949	R	9,899
	HUNGRY HORSE	2023	2058	3,770	3,770	.05949	R	3,770
	LOWER GRANITE	2018	2058	8,716	8,716	.05949	R	8,716
	COLUMBIA BASIN	2018	2058	215,990	215,990	.05949	R	196,294
	TOTAL							617,999
2025	LOWER MONUMENTAL	2018	2025	26	26	.05554	R	26
	LIBBY	2018	2025	77	77	.05554	R	77
	LOST CREEK	2017	2025	1	1	.05571	R	1
	ALBENI FALLS	2015	2025	1	1	.05607	R	1
	LOWER SNAKE F AND W	2018	2025	642	642	.05554	R	642
	LOWER GRANITE	2015	2025	1,003	1,003	.05607	R	1,003
	MCNARY	2015	2025	65,841	65,841	.05607	R	65,841
	LOST CREEK	2013	2025	5	5	.05641	R	5
	MCNARY	2018	2025	32	32	.05554	R	32
	LOOKOUT POINT-DEXTER	2018	2025	17	17	.05554	R	17
	BONNEVILLE	2018	2025	30,984	30,984	.05554	R	30,984
	LOWER MONUMENTAL	2017	2025	50	50	.05571	R	50
	BONNEVILLE	2013	2025	164	164	.05641	R	164
	ICE HARBOR	2018	2025	29,048	29,048	.05554	R	29,048
	LOOKOUT POINT-DEXTER	2015	2025	123	123	.05607	R	123
	COLUMBIA BASIN	2018	2058	215,990	19,696	.05949	R	19,696
	DETROIT-BIG CLIFF	2024	2059	2,817	2,817	.05949	R	2,817
	LOWER MONUMENTAL	2019	2059	7,742	7,742	.05949	R	7,742
	ALBENI FALLS	2025	2060	9,661	9,661	.05949	R	9,661
	JOHN DAY	2015	2060	32,467	32,467	.05949	R	32,467
	MCNARY	2025	2060	71,147	71,147	.05949	R	71,147
	BONNEVILLE	2021	2061	73,022	73,022	.05949	R	73,022

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR --INVESTMENT PAID--

(ALL AMOUNT IN $1000)

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PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
ICE HARBOR	2012	2062	4,428	4,428	.05949	R	4,428
BOISE	2017	2062	861	861	.05949	R	861
BONNEVILLE	2022	2062	70,689	70,689	.05949	R	70,689
THE DALLES	2018	2063	6,548	6,548	.05949	R	6,548
LOWER SNAKE F AND W	2023	2063	8,084	8,084	.05949	R	8,084
LIBBY	2025	2065	8,868	8,868	.05949	R	8,868
ICE HARBOR	2021	2066	31	31	.05949	R	31
LOST CREEK	2022	2067	1,362	1,362	.05949	R	1,362
BONNEVILLE	2022	2067	65,325	65,325	.05949	R	65,325
MINIDOKA	2017	2067	5,402	5,402	.05949	R	5,402
LITTLE GOOSE	2023	2068	142	142	.05949	R	142
COLUMBIA BASIN	2023	2068	67,373	67,373	.05949	R	67,373
LOWER MONUMENTAL	2024	2069	127	127	.05949	R	127
LOWER MONUMENTAL	2019	2069	4,636	4,636	.05949	R	4,636
LITTLE GOOSE	2021	2071	4,014	4,014	.05949	R	4,014
DWORSHAK	2023	2073	1,966	1,966	.05949	R	1,966
LOWER GRANITE	2025	2075	1,782	1,782	.05949	R	1,782
COLUMBIA BASIN	2003	2028	507	507	.05930		507
COLUMBIA BASIN	2004	2029	507	507	.05930		507
COLUMBIA BASIN	2005	2030	507	507	.05910		507
HILLS CREEK	2012	2037	1	1	.05864	R	1
ICE HARBOR	2012	2037	1,783	1,783	.05864	R	1,783
COUGAR	2014	2039	151	151	.05864	R	151
BONNEVILLE	2016	2041	2,922	2,922	.05864	R	2,922
MINIDOKA	2017	2042	2,215	2,215	.05864	R	2,215
GREEN PETER-FOSTER	2017	2042	151	151	.05864	R	151
GREEN PETER-FOSTER	2018	2043	77	77	.05864	R	77
LOWER MONUMENTAL	2019	2044	961	961	.05864	R	961
JOHN DAY	2020	2045	731	731	.05864	R	731
LITTLE GOOSE	2021	2046	1,100	1,100	.05864	R	1,100
COLUMBIA BASIN	2022	2047	50,909	50,909	.05864	R	44,257
TOTAL							652,074

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

+ YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2026	DETROIT-BIG CLIFF	2018	2026	5	5	.05571	R	5
	BONNEVILLE	2021	2026	72,812	72,812	.05488	R	72,812
	JOHN DAY	2018	2026	5	5	.05571	R	5
	ICE HARBOR	2018	2026	7,875	7,875	.05571	R	7,875
	LIBBY	2016	2026	77	77	.05607	R	77
	DETROIT-BIG CLIFF	2014	2026	27	27	.05641	R	27
	JOHN DAY	2019	2026	31	31	.05554	R	31
	YAKIMA-CHANDLER	2016	2026	67	67	.05607	R	67
	YAKIMA-CHANDLER	2026	2061	540	540	.05949	R	540
	ICE HARBOR	2026	2076	1,401	1,401	.05949	R	1,401
	LIBBY	2026	2076	3,761	3,761	.05949	R	3,761
	COLUMBIA BASIN	2022	2047	50,909	6,652	.05864	R	6,652
	DWORSHAK	2023	2048	8,301	8,301	.05864	R	8,301
	LOWER GRANITE	2025	2050	234	234	.05864	R	234
	ICE HARBOR	2026	2051	48	48	.05864	R	48
	LIBBY	2026	2051	2,960	2,960	.05864	R	2,960
	COLUMBIA BASIN	2006	2031	507	507	.05860		507
	LITTLE GOOSE	2011	2031	33,953	33,953	.05778	R	33,953
	HUNGRY HORSE	2013	2033	795	795	.05778	R	795
	DWORSHAK	2013	2033	3,845	3,845	.05778	R	3,845
	THE DALLES	2013	2033	254	254	.05778	R	254
	DETROIT-BIG CLIFF	2014	2034	5,164	5,164	.05778	R	5,164
	DETROIT-BIG CLIFF	2014	2034	334	334	.05778	R	334
	LOWER GRANITE	2015	2035	40,279	40,279	.05778	R	40,279
	LOOKOUT POINT-DEXTER	2015	2035	497	497	.05778	R	497
	LOOKOUT POINT-DEXTER	2015	2035	85	85	.05778	R	85
	ALBENI FALLS	2015	2035	1,052	1,052	.05778	R	1,052
	MCNARY	2015	2035	1,392	1,392	.05778	R	1,392
	LIBBY	2016	2036	750	750	.05778	R	750
	ICE HARBOR	2016	2036	219	219	.05778	R	219
	YAKIMA-CHANDLER	2016	2036	99	99	.05778	R	99
	MINIDOKA	2017	2037	314	314	.05778	R	314
	MINIDOKA	2017	2037	106	106	.05778	R	106
	LOST CREEK	2017	2037	43	43	.05778	R	43
	CHIEF JOSEPH	2017	2037	2,457	2,457	.05778	R	2,457
	LOWER GRANITE	2018	2038	352	352	.05778	R	352
	LITTLE GOOSE	2018	2038	218	218	.05778	R	218
	CHIEF JOSEPH	2018	2038	798	798	.05778	R	798
	YAKIMA-ROZA	2018	2038	9	9	.05778	R	9

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ------INVESTMENT PAID------

(ALL AMOUNT IN $1000)

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PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
COLUMBIA BASIN	2018	2038	6,192	6,192	.05778	R	6,192
LOWER MONUMENTAL	2019	2039	349	349	.05778	R	349
THE DALLES	2019	2039	1,406	1,406	.05778	R	1,406
BONNEVILLE	2021	2041	700	700	.05778	R	700
ICE HARBOR	2022	2042	1,634	1,634	.05778	R	1,634
LOWER SNAKE F AND W	2023	2043	5,870	5,870	.05778	R	5,870
COUGAR	2024	2044	80	80	.05778	R	80
BONNEVILLE	2012	2027	1,251	1,251	.05692	R	1,251
LOWER SNAKE F AND W	2013	2028	1,263	1,263	.05692	R	1,263
HUNGRY HORSE	2013	2028	529	529	.05692	R	529
DETROIT-BIG CLIFF	2014	2029	26,466	26,466	.05692	R	26,466
LOWER MONUMENTAL	2014	2029	33,179	33,179	.05692	R	33,179
DETROIT-BIG CLIFF	2014	2029	19	19	.05692	R	19
LOOKOUT POINT-DEXTER	2015	2030	489	489	.05692	R	489
JOHN DAY	2015	2030	178	178	.05692	R	178
ALBENI FALLS	2015	2030	66	66	.05692	R	66
MCNARY	2015	2030	23,884	23,884	.05692	R	23,884
LIBBY	2015	2030	234	234	.05692	R	234
JOHN DAY	2015	2030	2,241	2,241	.05692	R	2,241
BONNEVILLE	2016	2031	2,903	2,903	.05692	R	2,903
YAKIMA-CHANDLER	2016	2031	28	28	.05692	R	28
LITTLE GOOSE	2016	2031	34,470	34,470	.05692	R	34,470
MINIDOKA	2017	2032	143	143	.05692	R	143
BOISE	2017	2032	14	14	.05692	R	14
CHIEF JOSEPH	2017	2032	1,607	1,607	.05692	R	1,607
THE DALLES	2018	2033	2,205	2,205	.05692	R	2,205
YAKIMA-ROZA	2018	2033	3	3	.05692	R	3
DWORSHAK	2018	2033	3,295	3,295	.05692	R	3,295
THE DALLES	2019	2034	1,429	1,429	.05692	R	1,429
LOWER GRANITE	2020	2035	19,623	19,623	.05692	R	19,623
LIBBY	2021	2036	2,135	2,135	.05692	R	2,135
MINIDOKA	2022	2037	97	97	.05692	R	97
COLUMBIA BASIN	2022	2037	953	953	.05692	R	953
LOWER GRANITE	2023	2038	352	352	.05692	R	352
CHIEF JOSEPH	2023	2038	227	227	.05692	R	227
COLUMBIA BASIN	2023	2038	1,288	1,288	.05692	R	1,288
COUGAR	2024	2039	49	49	.05692	R	49
LOOKOUT POINT-DEXTER	2015	2027	44	44	.05641	R	44
ALBENI FALLS	2015	2027	148	148	.05641	R	148

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

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PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
MCNARY	2015	2027	32,275	32,275	.05641	R	32,275
LOWER MONUMENTAL	2017	2029	2,582	2,582	.05641	R	2,582
JOHN DAY	2018	2030	49	49	.05641	R	49
LITTLE GOOSE	2019	2031	2,582	2,582	.05641	R	2,582
LOWER SNAKE F AND W	2019	2031	586	586	.05641	R	586
THE DALLES	2019	2031	10	10	.05641	R	10
DWORSHAK	2021	2033	61	61	.05641	R	61
THE DALLES	2021	2033	1,949	1,949	.05641	R	1,949
ICE HARBOR	2022	2034	5,422	5,422	.05641	R	5,422
LOWER GRANITE	2023	2035	23	23	.05641	R	23
LOST CREEK	2025	2037	5	5	.05641	R	5
BONNEVILLE	2025	2037	164	164	.05641	R	164
DETROIT-BIG CLIFF	2026	2038	27	27	.05641	R	27
GREEN PETER-FOSTER	2017	2027	25	25	.05607	R	25
MINIDOKA	2017	2027	18	18	.05607	R	18
CHIEF JOSEPH	2017	2027	46	46	.05607	R	46
LITTLE GOOSE	2018	2028	1,171	1,171	.05607	R	1,171
THE DALLES	2019	2029	1	1	.05607	R	1
LOWER MONUMENTAL	2019	2029	13	13	.05607	R	13
LITTLE GOOSE	2021	2031	13	13	.05607	R	13
BONNEVILLE	2021	2031	127	127	.05607	R	127
ICE HARBOR	2022	2032	14,976	14,976	.05607	R	14,976
LOWER SNAKE F AND W	2023	2033	1,168	1,168	.05607	R	1,168
DWORSHAK	2023	2033	207	207	.05607	R	207
DETROIT-BIG CLIFF	2024	2034	36	36	.05607	R	36
ALBENI FALLS	2025	2035	1	1	.05607	R	1
LOOKOUT POINT-DEXTER	2025	2035	123	123	.05607	R	123
LOWER GRANITE	2025	2035	1,003	1,003	.05607	R	1,003
MCNARY	2025	2035	65,841	65,841	.05607	R	65,841
YAKIMA-CHANDLER	2026	2036	67	67	.05607	R	67
LIBBY	2026	2036	77	77	.05607	R	77
LITTLE GOOSE	2019	2027	45	45	.05571	R	45
LOOKOUT POINT-DEXTER	2019	2027	6	6	.05571	R	6
MCNARY	2019	2027	67	67	.05571	R	67
COUGAR	2020	2028	4	4	.05571	R	4
DWORSHAK	2021	2029	43	43	.05571	R	43
BONNEVILLE	2021	2029	4,519	4,519	.05571	R	4,519
GREEN PETER-FOSTER	2023	2031	15	15	.05571	R	15
LOWER SNAKE F AND W	2023	2031	123	123	.05571	R	123

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	THE DALLES	2023	2031	80	80	.05571	R	80
	LOWER GRANITE	2023	2031	36	36	.05571	R	36
	LOWER MONUMENTAL	2025	2033	50	50	.05571	R	50
	LOST CREEK	2025	2033	1	1	.05571	R	1
	ICE HARBOR	2026	2034	7,875	7,875	.05571	R	7,875
	JOHN DAY	2026	2034	5	5	.05571	R	5
	DETROIT-BIG CLIFF	2026	2034	5	5	.05571	R	5
	COUGAR	2020	2027	3	3	.05554	R	3
	LITTLE GOOSE	2020	2027	26	26	.05554	R	26
	DWORSHAK	2022	2029	19	19	.05554	R	19
	THE DALLES	2022	2029	53	53	.05554	R	53
	GREEN PETER-FOSTER	2023	2030	19	19	.05554	R	19
	LOWER GRANITE	2024	2031	27	27	.05554	R	27
	DETROIT-BIG CLIFF	2024	2031	3	3	.05554	R	3
	LIBBY	2025	2032	77	77	.05554	R	77
	LOWER MONUMENTAL	2025	2032	26	26	.05554	R	26
	LOWER SNAKE F AND W	2025	2032	642	642	.05554	R	642
	BONNEVILLE	2025	2032	30,984	30,984	.05554	R	30,984
	LOOKOUT POINT-DEXTER	2025	2032	17	17	.05554	R	17
	ICE HARBOR	2025	2032	29,048	29,048	.05554	R	29,048
	MCNARY	2025	2032	32	32	.05554	R	32
	JOHN DAY	2026	2033	31	31	.05554	R	31
	ICE HARBOR	2022	2027	15,363	15,363	.05488	R	15,363
	LOWER SNAKE F AND W	2023	2028	54	54	.05488	R	54
	THE DALLES	2024	2029	49	49	.05488	R	49
	BONNEVILLE	2026	2031	72,812	72,812	.05488	R	72,812
	COLUMBIA RIVER FISH MITIGATION	1999	2049	100,865	100,865	.05325		13,388
	TOTAL							681,556
2027	GREEN PETER-FOSTER	2027	2057	501	501	.05949	R	501
	CHIEF JOSEPH	2027	2062	64,683	64,683	.05949	R	64,683
	MINIDOKA	2027	2062	835	835	.05949	R	835
	COLUMBIA BASIN	2027	2067	49,177	49,177	.05949	R	49,177
	BONNEVILLE	2027	2072	1,082	1,082	.05949	R	1,082
	LOST CREEK	2027	2077	653	653	.05949	R	653
	BONNEVILLE	2027	2077	336	336	.05949	R	336
	BOISE	2027	2077	8,883	8,883	.05949	R	8,883
	BONNEVILLE	2027	2052	15	15	.05864	R	15
	BOISE	2027	2052	24,348	24,348	.05864	R	24,348

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOST CREEK	2027	2052	84	84	.05864	R	84
	COLUMBIA BASIN	2027	2047	5,285	5,285	.05778	R	5,285
	GREEN PETER-FOSTER	2027	2047	1,093	1,093	.05778	R	1,093
	BOISE	2027	2047	159	159	.05778	R	159
	BONNEVILLE	2027	2042	1,251	1,251	.05692	R	1,251
	MCNARY	2027	2039	32,275	32,275	.05641	R	32,275
	LOOKOUT POINT-DEXTER	2027	2039	44	44	.05641	R	44
	ALBENI FALLS	2027	2039	148	148	.05641	R	148
	CHIEF JOSEPH	2027	2037	46	46	.05607	R	46
	GREEN PETER-FOSTER	2027	2037	25	25	.05607	R	25
	MINIDOKA	2027	2037	18	18	.05607	R	18
	LOOKOUT POINT-DEXTER	2027	2035	6	6	.05571	R	6
	MCNARY	2027	2035	67	67	.05571	R	67
	LITTLE GOOSE	2027	2035	45	45	.05571	R	45
	COUGAR	2027	2034	3	3	.05554	R	3
	LITTLE GOOSE	2027	2034	26	26	.05554	R	26
	ICE HARBOR	2027	2032	15,363	15,363	.05488	R	15,363
	COLUMBIA RIVER FISH MITIGATION	1999	2049	100,865	87,477	.05325		87,477
	TOTAL							293,928
2028	GREEN PETER-FOSTER	2028	2058	181	181	.05949	R	181
	YAKIMA-ROZA	2028	2063	62	62	.05949	R	62
	LOWER SNAKE F AND W	2028	2073	1,207	1,207	.05949	R	1,207
	LOWER GRANITE	2028	2078	1,860	1,860	.05949	R	1,860
	LITTLE GOOSE	2028	2078	1,921	1,921	.05949	R	1,921
	COLUMBIA BASIN	2028	2078	131,228	131,228	.05949	R	131,228
	CHIEF JOSEPH	2028	2078	13,873	13,873	.05949	R	13,873
	LITTLE GOOSE	2028	2053	43	43	.05864	R	43
	HUNGRY HORSE	2028	2053	12,103	12,103	.05864	R	12,103
	LOWER GRANITE	2028	2053	132	132	.05864	R	132
	COLUMBIA BASIN	2028	2053	55,867	55,867	.05864	R	55,867
	CHIEF JOSEPH	2028	2053	385	385	.05864	R	385
	GREEN PETER-FOSTER	2028	2048	893	893	.05778	R	893
	HUNGRY HORSE	2028	2043	529	529	.05692	R	529
	LOWER SNAKE F AND W	2028	2043	1,263	1,263	.05692	R	1,263
	LITTLE GOOSE	2028	2038	1,171	1,171	.05607	R	1,171
	COUGAR	2028	2036	4	4	.05571	R	4
	LOWER SNAKE F AND W	2028	2033	54	54	.05488	R	54
	TOTAL							222,776

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2029	LOWER MONUMENTAL	2029	2059	278	278	.05949	R	278
	THE DALLES	2029	2064	79,074	79,074	.05949	R	79,074
	LOWER MONUMENTAL	2029	2079	1,882	1,882	.05949	R	1,882
	LOWER MONUMENTAL	2029	2054	45	45	.05864	R	45
	DETROIT-BIG CLIFF	2029	2054	234	234	.05864	R	234
	DETROIT-BIG CLIFF	2029	2054	120	120	.05864	R	120
	LOWER MONUMENTAL	2029	2049	33,953	33,953	.05778	R	33,953
	LOWER MONUMENTAL	2029	2044	33,179	33,179	.05692	R	33,179
	DETROIT-BIG CLIFF	2029	2044	26,466	26,466	.05692	R	26,466
	DETROIT-BIG CLIFF	2029	2044	19	19	.05692	R	19
	LOWER MONUMENTAL	2029	2041	2,582	2,582	.05641	R	2,582
	LOWER MONUMENTAL	2029	2039	13	13	.05607	R	13
	THE DALLES	2029	2039	1	1	.05607	R	1
	DWORSHAK	2029	2037	43	43	.05571	R	43
	BONNEVILLE	2029	2037	4,519	4,519	.05571	R	4,519
	DWORSHAK	2029	2036	19	19	.05554	R	19
	THE DALLES	2029	2036	53	53	.05554	R	53
	THE DALLES	2029	2034	49	49	.05488	R	49
	TOTAL							182,529
2030	JOHN DAY	2030	2060	3,998	3,998	.05949	R	3,998
	MCNARY	2030	2055	1,029	1,029	.05864	R	1,029
	LOOKOUT POINT-DEXTER	2030	2055	605	605	.05864	R	605
	LOOKOUT POINT-DEXTER	2030	2055	39	39	.05864	R	39
	ALBENI FALLS	2030	2055	2,866	2,866	.05864	R	2,866
	JOHN DAY	2030	2050	2,241	2,241	.05778	R	2,241
	MCNARY	2030	2045	23,884	23,884	.05692	R	23,884
	JOHN DAY	2030	2045	178	178	.05692	R	178
	LIBBY	2030	2045	234	234	.05692	R	234
	JOHN DAY	2030	2045	2,241	2,241	.05692	R	2,241
	ALBENI FALLS	2030	2045	66	66	.05692	R	66
	LOOKOUT POINT-DEXTER	2030	2045	489	489	.05692	R	489
	JOHN DAY	2030	2042	49	49	.05641	R	49
	GREEN PETER-FOSTER	2030	2037	19	19	.05554	R	19
	TOTAL							37,938

YEAR ----INVESTMENT PAID----

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
2031	LITTLE GOOSE	2031	2061	272	272	.05949	R	272
	BONNEVILLE	2031	2076	1,257	1,257	.05949	R	1,257
	YAKIMA-CHANDLER	2031	2056	1,062	1,062	.05864	R	1,062
	LITTLE GOOSE	2031	2051	33,953	33,953	.05778	R	33,953
	LITTLE GOOSE	2031	2046	34,470	34,470	.05692	R	34,470
	YAKIMA-CHANDLER	2031	2046	28	28	.05692	R	28
	BONNEVILLE	2031	2046	2,903	2,903	.05692	R	2,903
	LOWER SNAKE F AND W	2031	2043	586	586	.05641	R	586
	LITTLE GOOSE	2031	2043	2,582	2,582	.05641	R	2,582
	THE DALLES	2031	2043	10	10	.05641	R	10
	LITTLE GOOSE	2031	2041	13	13	.05607	R	13
	BONNEVILLE	2031	2041	127	127	.05607	R	127
	GREEN PETER-FOSTER	2031	2039	15	15	.05571	R	15
	LOWER SNAKE F AND W	2031	2039	123	123	.05571	R	123
	LOWER GRANITE	2031	2039	36	36	.05571	R	36
	THE DALLES	2031	2039	80	80	.05571	R	80
	DETROIT-BIG CLIFF	2031	2038	3	3	.05554	R	3
	LOWER GRANITE	2031	2038	27	27	.05554	R	27
	BONNEVILLE	2031	2036	72,812	72,812	.05488	R	72,812
	TOTAL							150,359
2032	ICE HARBOR	2032	2067	18,944	18,944	.05949	R	18,944
	BOISE	2032	2067	1,096	1,096	.05949	R	1,096
	BONNEVILLE	2032	2082	15,322	15,322	.05949	R	15,322
	MINIDOKA	2032	2057	2,648	2,648	.05864	R	2,648
	CHIEF JOSEPH	2032	2057	4,722	4,722	.05864	R	4,722
	BONNEVILLE	2032	2057	4,800	4,800	.05864	R	4,800
	CHIEF JOSEPH	2032	2047	1,607	1,607	.05692	R	1,607
	MINIDOKA	2032	2047	143	143	.05692	R	143
	BOISE	2032	2047	14	14	.05692	R	14
	ICE HARBOR	2032	2042	14,976	14,976	.05607	R	14,976
	LOWER SNAKE F AND W	2032	2039	642	642	.05554	R	642
	LIBBY	2032	2039	77	77	.05554	R	77
	LOWER MONUMENTAL	2032	2039	26	26	.05554	R	26
	LOOKOUT POINT-DEXTER	2032	2039	17	17	.05554	R	17
	BONNEVILLE	2032	2039	30,984	30,984	.05554	R	30,984
	MCNARY	2032	2039	32	32	.05554	R	32
	ICE HARBOR	2032	2039	29,048	29,048	.05554	R	29,048
	ICE HARBOR	2032	2037	15,363	15,363	.05488	R	15,363

YEAR ----------INVESTMENT PAID----------

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	TOTAL							140,461
2033	THE DALLES	2033	2063	21,796	21,796	.05949	R	21,796
	HUNGRY HORSE	2033	2073	6,916	6,916	.05949	R	6,916
	LOWER SNAKE F AND W	2033	2083	18,862	18,862	.05949	R	18,862
	YAKIMA-ROZA	2033	2058	120	120	.05864	R	120
	LOWER SNAKE F AND W	2033	2058	1,135	1,135	.05864	R	1,135
	THE DALLES	2033	2053	254	254	.05778	R	254
	HUNGRY HORSE	2033	2053	795	795	.05778	R	795
	DWORSHAK	2033	2053	3,845	3,845	.05778	R	3,845
	YAKIMA-ROZA	2033	2048	3	3	.05692	R	3
	DWORSHAK	2033	2048	3,295	3,295	.05692	R	3,295
	THE DALLES	2033	2048	2,205	2,205	.05692	R	2,205
	THE DALLES	2033	2045	1,949	1,949	.05641	R	1,949
	DWORSHAK	2033	2045	61	61	.05641	R	61
	LOWER SNAKE F AND W	2033	2043	1,168	1,168	.05607	R	1,168
	DWORSHAK	2033	2043	207	207	.05607	R	207
	LOST CREEK	2033	2041	1	1	.05571	R	1
	LOWER MONUMENTAL	2033	2041	50	50	.05571	R	50
	JOHN DAY	2033	2040	31	31	.05554	R	31
	LOWER SNAKE F AND W	2033	2038	54	54	.05488	R	54
	TOTAL							62,747
2034	COUGAR	2034	2069	2,903	2,903	.05949	R	2,903
	DETROIT-BIG CLIFF	2034	2074	14,517	14,517	.05949	R	14,517
	DETROIT-BIG CLIFF	2034	2074	1,690	1,690	.05949	R	1,690
	THE DALLES	2034	2059	2,887	2,887	.05864	R	2,887
	DETROIT-BIG CLIFF	2034	2054	334	334	.05778	R	334
	DETROIT-BIG CLIFF	2034	2054	5,164	5,164	.05778	R	5,164
	THE DALLES	2034	2049	1,429	1,429	.05692	R	1,429
	ICE HARBOR	2034	2046	5,422	5,422	.05641	R	5,422
	DETROIT-BIG CLIFF	2034	2044	36	36	.05607	R	36
	DETROIT-BIG CLIFF	2034	2042	5	5	.05571	R	5
	JOHN DAY	2034	2042	5	5	.05571	R	5
	ICE HARBOR	2034	2042	7,875	7,875	.05571	R	7,875
	LITTLE GOOSE	2034	2041	26	26	.05554	R	26
	COUGAR	2034	2041	3	3	.05554	R	3
	THE DALLES	2034	2039	49	49	.05488	R	49
	TOTAL							42,345

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2035	LOWER GRANITE	2035	2065	753	753	.05949	R	753
	MCNARY	2035	2075	36,506	36,506	.05949	R	36,506
	LOOKOUT POINT-DEXTER	2035	2075	2,399	2,399	.05949	R	2,399
	LOOKOUT POINT-DEXTER	2035	2075	12,028	12,028	.05949	R	12,028
	ALBENI FALLS	2035	2075	723	723	.05949	R	723
	LIBBY	2035	2085	6,842	6,842	.05949	R	6,842
	LIBBY	2035	2060	315	315	.05864	R	315
	LOOKOUT POINT-DEXTER	2035	2055	497	497	.05778	R	497
	MCNARY	2035	2055	1,392	1,392	.05778	R	1,392
	LOOKOUT POINT-DEXTER	2035	2055	85	85	.05778	R	85
	ALBENI FALLS	2035	2055	1,052	1,052	.05778	R	1,052
	LOWER GRANITE	2035	2055	40,279	40,279	.05778	R	40,279
	LOWER GRANITE	2035	2050	19,623	19,623	.05692	R	19,623
	LOWER GRANITE	2035	2047	23	23	.05641	R	23
	LOOKOUT POINT-DEXTER	2035	2045	123	123	.05607	R	123
	MCNARY	2035	2045	65,841	65,841	.05607	R	65,841
	LOWER GRANITE	2035	2045	1,003	1,003	.05607	R	1,003
	ALBENI FALLS	2035	2045	1	1	.05607	R	1
	LITTLE GOOSE	2035	2043	45	45	.05571	R	45
	LOOKOUT POINT-DEXTER	2035	2043	6	6	.05571	R	6
	MCNARY	2035	2043	67	67	.05571	R	67
	TOTAL							189,603
2036	YAKIMA-CHANDLER	2036	2076	533	533	.05949	R	533
	YAKIMA-CHANDLER	2036	2056	99	99	.05778	R	99
	LIBBY	2036	2056	750	750	.05778	R	750
	ICE HARBOR	2036	2056	219	219	.05778	R	219
	LIBBY	2036	2051	2,135	2,135	.05692	R	2,135
	YAKIMA-CHANDLER	2036	2046	67	67	.05607	R	67
	LIBBY	2036	2046	77	77	.05607	R	77
	COUGAR	2036	2044	4	4	.05571	R	4
	DWORSHAK	2036	2043	19	19	.05554	R	19
	THE DALLES	2036	2043	53	53	.05554	R	53
	BONNEVILLE	2036	2041	72,812	72,812	.05488	R	72,812
	TOTAL							76,768

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2037	MINIDOKA	2037	2067	79	79	.05949	R	79
	LOST CREEK	2037	2067	185	185	.05949	R	185
	COLUMBIA BASIN	2037	2067	2,360	2,360	.05949	R	2,360
	MINIDOKA	2037	2077	1,850	1,850	.05949	R	1,850
	MINIDOKA	2037	2077	7,133	7,133	.05949	R	7,133
	CHIEF JOSEPH	2037	2077	31,147	31,147	.05949	R	31,147
	COLUMBIA BASIN	2037	2082	52,195	52,195	.05949	R	52,195
	ICE HARBOR	2037	2062	1,783	1,783	.05864	R	1,783
	HILLS CREEK	2037	2062	1	1	.05864	R	1
	LOST CREEK	2037	2057	43	43	.05778	R	43
	MINIDOKA	2037	2057	106	106	.05778	R	106
	MINIDOKA	2037	2057	314	314	.05778	R	314
	CHIEF JOSEPH	2037	2057	2,457	2,457	.05778	R	2,457
	COLUMBIA BASIN	2037	2052	953	953	.05692	R	953
	MINIDOKA	2037	2052	97	97	.05692	R	97
	LOST CREEK	2037	2049	5	5	.05641	R	5
	BONNEVILLE	2037	2049	164	164	.05641	R	164
	GREEN PETER-FOSTER	2037	2047	25	25	.05607	R	25
	MINIDOKA	2037	2047	18	18	.05607	R	18
	CHIEF JOSEPH	2037	2047	46	46	.05607	R	46
	DWORSHAK	2037	2045	43	43	.05571	R	43
	BONNEVILLE	2037	2045	4,519	4,519	.05571	R	4,519
	GREEN PETER-FOSTER	2037	2044	19	19	.05554	R	19
	ICE HARBOR	2037	2042	15,363	15,363	.05488	R	15,363
	TOTAL							120,905
2038	COLUMBIA BASIN	2038	2068	2,649	2,649	.05949	R	2,649
	YAKIMA-ROZA	2038	2078	141	141	.05949	R	141
	LOWER GRANITE	2038	2058	352	352	.05778	R	352
	LITTLE GOOSE	2038	2058	218	218	.05778	R	218
	YAKIMA-ROZA	2038	2058	9	9	.05778	R	9
	COLUMBIA BASIN	2038	2058	6,192	6,192	.05778	R	6,192
	CHIEF JOSEPH	2038	2058	798	798	.05778	R	798
	LOWER GRANITE	2038	2053	352	352	.05692	R	352
	COLUMBIA BASIN	2038	2053	1,288	1,288	.05692	R	1,288
	CHIEF JOSEPH	2038	2053	227	227	.05692	R	227
	DETROIT-BIG CLIFF	2038	2050	27	27	.05641	R	27
	LITTLE GOOSE	2038	2048	1,171	1,171	.05607	R	1,171
	DETROIT-BIG CLIFF	2038	2045	3	3	.05554	R	3

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOWER GRANITE	2038	2045	27	27	.05554	R	27
	LOWER SNAKE F AND W	2038	2043	54	54	.05488	R	54

	TOTAL							13,508
2039	LOWER MONUMENTAL	2039	2074	11,593	11,593	.05949	R	11,593
	THE DALLES	2039	2079	49,926	49,926	.05949	R	49,926
	COUGAR	2039	2064	151	151	.05864	R	151
	LOWER MONUMENTAL	2039	2059	349	349	.05778	R	349
	THE DALLES	2039	2059	1,406	1,406	.05778	R	1,406
	COUGAR	2039	2054	49	49	.05692	R	49
	LOOKOUT POINT-DEXTER	2039	2051	44	44	.05641	R	44
	MCNARY	2039	2051	32,275	32,275	.05641	R	32,275
	ALBENI FALLS	2039	2051	148	148	.05641	R	148
	THE DALLES	2039	2049	1	1	.05607	R	1
	LOWER MONUMENTAL	2039	2049	13	13	.05607	R	13
	THE DALLES	2039	2047	80	80	.05571	R	80
	LOWER GRANITE	2039	2047	36	36	.05571	R	36
	GREEN PETER-FOSTER	2039	2047	15	15	.05571	R	15
	LOWER SNAKE F AND W	2039	2047	123	123	.05571	R	123
	LOOKOUT POINT-DEXTER	2039	2046	17	17	.05554	R	17
	LIBBY	2039	2046	77	77	.05554	R	77
	ICE HARBOR	2039	2046	29,048	29,048	.05554	R	29,048
	LOWER MONUMENTAL	2039	2046	26	26	.05554	R	26
	MCNARY	2039	2046	32	32	.05554	R	32
	BONNEVILLE	2039	2046	30,984	30,984	.05554	R	30,984
	LOWER SNAKE F AND W	2039	2046	642	642	.05554	R	642
	THE DALLES	2039	2044	49	49	.05488	R	49

	TOTAL							157,084
2040	JOHN DAY	2040	2075	608	608	.05949	R	608
	JOHN DAY	2040	2047	31	31	.05554	R	31

	TOTAL							639

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2041	LITTLE GOOSE	2041	2076	14,147	14,147	.05949	R	14,147
	DETROIT-BIG CLIFF	2041	2091	636	636	.05949	R	636
	BONNEVILLE	2041	2091	24,277	24,277	.05949	R	24,277
	BONNEVILLE	2041	2066	2,922	2,922	.05864	R	2,922
	BONNEVILLE	2041	2061	700	700	.05778	R	700
	LOWER MONUMENTAL	2041	2053	2,582	2,582	.05641	R	2,582
	BONNEVILLE	2041	2051	127	127	.05607	R	127
	LITTLE GOOSE	2041	2051	13	13	.05607	R	13
	LOST CREEK	2041	2049	1	1	.05571	R	1
	LOWER MONUMENTAL	2041	2049	50	50	.05571	R	50
	LITTLE GOOSE	2041	2048	26	26	.05554	R	26
	COUGAR	2041	2048	3	3	.05554	R	3
	BONNEVILLE	2041	2046	72,812	72,812	.05488	R	72,812
	TOTAL							118,296
2042	ICE HARBOR	2042	2082	13,042	13,042	.05949	R	13,042
	HILLS CREEK	2042	2082	1,986	1,986	.05949	R	1,986
	MINIDOKA	2042	2067	2,215	2,215	.05864	R	2,215
	GREEN PETER-FOSTER	2042	2067	151	151	.05864	R	151
	ICE HARBOR	2042	2062	1,634	1,634	.05778	R	1,634
	BONNEVILLE	2042	2057	1,251	1,251	.05692	R	1,251
	JOHN DAY	2042	2054	49	49	.05641	R	49
	ICE HARBOR	2042	2052	14,976	14,976	.05607	R	14,976
	ICE HARBOR	2042	2050	7,875	7,875	.05571	R	7,875
	JOHN DAY	2042	2050	5	5	.05571	R	5
	DETROIT-BIG CLIFF	2042	2050	5	5	.05571	R	5
	ICE HARBOR	2042	2047	15,363	15,363	.05488	R	15,363
	TOTAL							58,552
2043	LOWER SNAKE F AND W	2043	2073	2,493	2,493	.05949	R	2,493
	HUNGRY HORSE	2043	2073	534	534	.05949	R	534
	THE DALLES	2043	2078	17,626	17,626	.05949	R	17,626
	DWORSHAK	2043	2078	13,957	13,957	.05949	R	13,957
	HUNGRY HORSE	2043	2088	7,596	7,596	.05949	R	7,596
	GREEN PETER-FOSTER	2043	2068	77	77	.05864	R	77
	LOWER SNAKE F AND W	2043	2063	5,870	5,870	.05778	R	5,870
	HUNGRY HORSE	2043	2058	529	529	.05692	R	529
	LOWER SNAKE F AND W	2043	2058	1,263	1,263	.05692	R	1,263
	LOWER SNAKE F AND W	2043	2055	586	586	.05641	R	586

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LITTLE GOOSE	2043	2055	2,582	2,582	.05641	R	2,582
	THE DALLES	2043	2055	10	10	.05641	R	10
	LOWER SNAKE F AND W	2043	2053	1,168	1,168	.05607	R	1,168
	DWORSHAK	2043	2053	207	207	.05607	R	207
	LITTLE GOOSE	2043	2051	45	45	.05571	R	45
	MCNARY	2043	2051	67	67	.05571	R	67
	LOOKOUT POINT-DEXTER	2043	2051	6	6	.05571	R	6
	DWORSHAK	2043	2050	19	19	.05554	R	19
	THE DALLES	2043	2050	53	53	.05554	R	53
	LOWER SNAKE F AND W	2043	2048	54	54	.05488	R	54

	TOTAL							54,742
2044	DETROIT-BIG CLIFF	2044	2074	698	698	.05949	R	698
	COUGAR	2044	2084	1,711	1,711	.05949	R	1,711
	DETROIT-BIG CLIFF	2044	2089	5,518	5,518	.05949	R	5,518
	LOWER MONUMENTAL	2044	2069	961	961	.05864	R	961
	COUGAR	2044	2064	80	80	.05778	R	80
	DETROIT-BIG CLIFF	2044	2059	26,466	26,466	.05692	R	26,466
	DETROIT-BIG CLIFF	2044	2059	19	19	.05692	R	19
	LOWER MONUMENTAL	2044	2059	33,179	33,179	.05692	R	33,179
	DETROIT-BIG CLIFF	2044	2054	36	36	.05607	R	36
	COUGAR	2044	2052	4	4	.05571	R	4
	GREEN PETER-FOSTER	2044	2051	19	19	.05554	R	19
	THE DALLES	2044	2049	49	49	.05488	R	49

	TOTAL							68,740
2045	LOWER GRANITE	2045	2080	9,529	9,529	.05949	R	9,529
	LOOKOUT POINT-DEXTER	2045	2090	2,612	2,612	.05949	R	2,612
	LOOKOUT POINT-DEXTER	2045	2090	6,285	6,285	.05949	R	6,285
	JOHN DAY	2045	2070	731	731	.05864	R	731
	LOOKOUT POINT-DEXTER	2045	2060	489	489	.05692	R	489
	MCNARY	2045	2060	23,884	23,884	.05692	R	23,884
	LIBBY	2045	2060	234	234	.05692	R	234
	JOHN DAY	2045	2060	178	178	.05692	R	178
	JOHN DAY	2045	2060	2,241	2,241	.05692	R	2,241
	ALBENI FALLS	2045	2060	66	66	.05692	R	66
	THE DALLES	2045	2057	1,949	1,949	.05641	R	1,949
	DWORSHAK	2045	2057	61	61	.05641	R	61
	LOWER GRANITE	2045	2055	1,003	1,003	.05607	R	1,003

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOOKOUT POINT-DEXTER	2045	2055	123	123	.05607	R	123
	ALBENI FALLS	2045	2055	1	1	.05607	R	1
	MCNARY	2045	2055	65,841	65,841	.05607	R	65,841
	BONNEVILLE	2045	2053	4,519	4,519	.05571	R	4,519
	DWORSHAK	2045	2053	43	43	.05571	R	43
	LOWER GRANITE	2045	2052	27	27	.05554	R	27
	DETROIT-BIG CLIFF	2045	2052	3	3	.05554	R	3

	TOTAL							119,819
2046	YAKIMA-CHANDLER	2046	2076	68	68	.05949	R	68
	LIBBY	2046	2081	11,804	11,804	.05949	R	11,804
	ICE HARBOR	2046	2081	7,271	7,271	.05949	R	7,271
	BONNEVILLE	2046	2081	82,824	82,824	.05949	R	82,824
	YAKIMA-CHANDLER	2046	2091	871	871	.05949	R	871
	LITTLE GOOSE	2046	2071	1,100	1,100	.05864	R	1,100
	LITTLE GOOSE	2046	2061	34,470	34,470	.05692	R	34,470
	YAKIMA-CHANDLER	2046	2061	28	28	.05692	R	28
	BONNEVILLE	2046	2061	2,903	2,903	.05692	R	2,903
	ICE HARBOR	2046	2058	5,422	5,422	.05641	R	5,422
	LIBBY	2046	2056	77	77	.05607	R	77
	YAKIMA-CHANDLER	2046	2056	67	67	.05607	R	67
	LIBBY	2046	2053	77	77	.05554	R	77
	ICE HARBOR	2046	2053	29,048	29,048	.05554	R	29,048
	MCNARY	2046	2053	32	32	.05554	R	32
	LOWER MONUMENTAL	2046	2053	26	26	.05554	R	26
	BONNEVILLE	2046	2053	30,984	30,984	.05554	R	30,984
	LOOKOUT POINT-DEXTER	2046	2053	17	17	.05554	R	17
	LOWER SNAKE F AND W	2046	2053	642	642	.05554	R	642
	BONNEVILLE	2046	2051	72,812	72,812	.05488	R	72,812

	TOTAL							280,543
2047	MINIDOKA	2047	2077	99	99	.05949	R	99
	BOISE	2047	2077	74	74	.05949	R	74
	LOST CREEK	2047	2082	19	19	.05949	R	19
	BONNEVILLE	2047	2082	17	17	.05949	R	17
	GREEN PETER-FOSTER	2047	2087	4,324	4,324	.05949	R	4,324
	BOISE	2047	2087	904	904	.05949	R	904
	MINIDOKA	2047	2092	4,528	4,528	.05949	R	4,528
	COLUMBIA BASIN	2047	2097	158,969	158,969	.05949	R	158,969

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	COLUMBIA BASIN	2047	2072	50,909	50,909	.05864	R	50,909
	GREEN PETER-FOSTER	2047	2067	1,093	1,093	.05778	R	1,093
	COLUMBIA BASIN	2047	2067	5,285	5,285	.05778	R	5,285
	BOISE	2047	2067	159	159	.05778	R	159
	MINIDOKA	2047	2062	143	143	.05692	R	143
	CHIEF JOSEPH	2047	2062	1,607	1,607	.05692	R	1,607
	BOISE	2047	2062	14	14	.05692	R	14
	LOWER GRANITE	2047	2059	23	23	.05641	R	23
	CHIEF JOSEPH	2047	2057	46	46	.05607	R	46
	MINIDOKA	2047	2057	18	18	.05607	R	18
	GREEN PETER-FOSTER	2047	2057	25	25	.05607	R	25
	GREEN PETER-FOSTER	2047	2055	15	15	.05571	R	15
	THE DALLES	2047	2055	80	80	.05571	R	80
	LOWER SNAKE F AND W	2047	2055	123	123	.05571	R	123
	LOWER GRANITE	2047	2055	36	36	.05571	R	36
	JOHN DAY	2047	2054	31	31	.05554	R	31
	ICE HARBOR	2047	2052	15,363	15,363	.05488	R	15,363

	TOTAL							243,904
2048	YAKIMA-ROZA	2048	2078	5	5	.05949	R	5
	LOWER GRANITE	2048	2083	11,223	11,223	.05949	R	11,223
	LITTLE GOOSE	2048	2083	11,039	11,039	.05949	R	11,039
	COLUMBIA BASIN	2048	2083	61,863	61,863	.05949	R	61,863
	CHIEF JOSEPH	2048	2083	78,501	78,501	.05949	R	78,501
	GREEN PETER-FOSTER	2048	2088	18,961	18,961	.05949	R	18,961
	YAKIMA-ROZA	2048	2093	238	238	.05949	R	238
	DWORSHAK	2048	2073	8,301	8,301	.05864	R	8,301
	GREEN PETER-FOSTER	2048	2068	893	893	.05778	R	893
	YAKIMA-ROZA	2048	2063	3	3	.05692	R	3
	DWORSHAK	2048	2063	3,295	3,295	.05692	R	3,295
	THE DALLES	2048	2063	2,205	2,205	.05692	R	2,205
	LITTLE GOOSE	2048	2058	1,171	1,171	.05607	R	1,171
	COUGAR	2048	2055	3	3	.05554	R	3
	LITTLE GOOSE	2048	2055	26	26	.05554	R	26
	LOWER SNAKE F AND W	2048	2053	54	54	.05488	R	54

	TOTAL							197,781

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
2049	LOWER MONUMENTAL	2049	2084	10,664	10,664	.05949	R	10,664
	LOWER MONUMENTAL	2049	2089	11,877	11,877	.05949	R	11,877
	LOWER MONUMENTAL	2049	2069	33,953	33,953	.05778	R	33,953
	THE DALLES	2049	2064	1,429	1,429	.05692	R	1,429
	LOST CREEK	2049	2061	5	5	.05641	R	5
	BONNEVILLE	2049	2061	164	164	.05641	R	164
	THE DALLES	2049	2059	1	1	.05607	R	1
	LOWER MONUMENTAL	2049	2059	13	13	.05607	R	13
	LOST CREEK	2049	2057	1	1	.05571	R	1
	LOWER MONUMENTAL	2049	2057	50	50	.05571	R	50
	THE DALLES	2049	2054	49	49	.05488	R	49
	TOTAL							58,206
2050	JOHN DAY	2050	2090	52,082	52,082	.05949	R	52,082
	LOWER GRANITE	2050	2075	234	234	.05864	R	234
	JOHN DAY	2050	2070	2,241	2,241	.05778	R	2,241
	LOWER GRANITE	2050	2065	19,623	19,623	.05692	R	19,623
	DETROIT-BIG CLIFF	2050	2062	27	27	.05641	R	27
	JOHN DAY	2050	2058	5	5	.05571	R	5
	ICE HARBOR	2050	2058	7,875	7,875	.05571	R	7,875
	DETROIT-BIG CLIFF	2050	2058	5	5	.05571	R	5
	DWORSHAK	2050	2057	19	19	.05554	R	19
	THE DALLES	2050	2057	53	53	.05554	R	53
	TOTAL							82,164
2051	LITTLE GOOSE	2051	2091	11,872	11,872	.05949	R	11,872
	LIBBY	2051	2076	2,960	2,960	.05864	R	2,960
	ICE HARBOR	2051	2076	48	48	.05864	R	48
	LITTLE GOOSE	2051	2071	33,953	33,953	.05778	R	33,953
	LIBBY	2051	2066	2,135	2,135	.05692	R	2,135
	MCNARY	2051	2063	32,275	32,275	.05641	R	32,275
	LOOKOUT POINT-DEXTER	2051	2063	44	44	.05641	R	44
	ALBENI FALLS	2051	2063	148	148	.05641	R	148
	LITTLE GOOSE	2051	2061	13	13	.05607	R	13
	BONNEVILLE	2051	2061	127	127	.05607	R	127
	LOOKOUT POINT-DEXTER	2051	2059	6	6	.05571	R	6
	MCNARY	2051	2059	67	67	.05571	R	67
	LITTLE GOOSE	2051	2059	45	45	.05571	R	45
	GREEN PETER-FOSTER	2051	2058	19	19	.05554	R	19

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	BONNEVILLE	2051	2056	72,812	72,812	.05488	R	72,812

	TOTAL							156,524
2052	ICE HARBOR	2052	2082	407	407	.05949	R	407
	HILLS CREEK	2052	2082	389	389	.05949	R	389
	COLUMBIA BASIN	2052	2087	44,684	44,684	.05949	R	44,684
	BONNEVILLE	2052	2087	79,089	79,089	.05949	R	79,089
	ICE HARBOR	2052	2097	225	225	.05949	R	225
	MINIDOKA	2052	2097	6,912	6,912	.05949	R	6,912
	HILLS CREEK	2052	2097	629	629	.05949	R	629
	LOST CREEK	2052	2077	84	84	.05864	R	84
	BONNEVILLE	2052	2077	15	15	.05864	R	15
	BOISE	2052	2077	24,348	24,348	.05864	R	24,348
	COLUMBIA BASIN	2052	2067	953	953	.05692	R	953
	MINIDOKA	2052	2067	97	97	.05692	R	97
	ICE HARBOR	2052	2062	14,976	14,976	.05607	R	14,976
	COUGAR	2052	2060	4	4	.05571	R	4
	LOWER GRANITE	2052	2059	27	27	.05554	R	27
	DETROIT-BIG CLIFF	2052	2059	3	3	.05554	R	3
	ICE HARBOR	2052	2057	15,363	15,363	.05488	R	15,363

	TOTAL							188,205
2053	LOWER SNAKE F AND W	2053	2088	1,282	1,282	.05949	R	1,282
	DWORSHAK	2053	2093	8,674	8,674	.05949	R	8,674
	HUNGRY HORSE	2053	2103	52,082	52,082	.05949	R	52,082
	LOWER GRANITE	2053	2078	132	132	.05864	R	132
	LITTLE GOOSE	2053	2078	43	43	.05864	R	43
	HUNGRY HORSE	2053	2078	12,103	12,103	.05864	R	12,103
	COLUMBIA BASIN	2053	2078	55,867	55,867	.05864	R	55,867
	CHIEF JOSEPH	2053	2078	385	385	.05864	R	385
	THE DALLES	2053	2073	254	254	.05778	R	254
	HUNGRY HORSE	2053	2073	795	795	.05778	R	795
	DWORSHAK	2053	2073	3,845	3,845	.05778	R	3,845
	LOWER GRANITE	2053	2068	352	352	.05692	R	352
	COLUMBIA BASIN	2053	2068	1,288	1,288	.05692	R	1,288
	CHIEF JOSEPH	2053	2068	227	227	.05692	R	227
	LOWER MONUMENTAL	2053	2065	2,582	2,582	.05641	R	2,582
	LOWER SNAKE F AND W	2053	2063	1,168	1,168	.05607	R	1,168
	DWORSHAK	2053	2063	207	207	.05607	R	207

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
	DWORSHAK	2053	2061	43	43	.05571	R	43
	BONNEVILLE	2053	2061	4,519	4,519	.05571	R	4,519
	LOWER SNAKE F AND W	2053	2060	642	642	.05554	R	642
	LOOKOUT POINT-DEXTER	2053	2060	17	17	.05554	R	17
	LOWER MONUMENTAL	2053	2060	26	26	.05554	R	26
	LIBBY	2053	2060	77	77	.05554	R	77
	ICE HARBOR	2053	2060	29,048	29,048	.05554	R	29,048
	MCNARY	2053	2060	32	32	.05554	R	32
	BONNEVILLE	2053	2060	30,984	30,984	.05554	R	30,984
	LOWER SNAKE F AND W	2053	2058	54	54	.05488	R	54
	TOTAL							206,728
2054	LOWER MONUMENTAL	2054	2079	45	45	.05864	R	45
	DETROIT-BIG CLIFF	2054	2079	120	120	.05864	R	120
	DETROIT-BIG CLIFF	2054	2079	234	234	.05864	R	234
	DETROIT-BIG CLIFF	2054	2074	334	334	.05778	R	334
	DETROIT-BIG CLIFF	2054	2074	5,164	5,164	.05778	R	5,164
	COUGAR	2054	2069	49	49	.05692	R	49
	JOHN DAY	2054	2066	49	49	.05641	R	49
	DETROIT-BIG CLIFF	2054	2064	36	36	.05607	R	36
	JOHN DAY	2054	2061	31	31	.05554	R	31
	THE DALLES	2054	2059	49	49	.05488	R	49
	TOTAL							6,111
2055	LIBBY	2055	2090	8,798	8,798	.05949	R	8,798
	LOWER GRANITE	2055	2095	7,947	7,947	.05949	R	7,947
	MCNARY	2055	2105	22,661	22,661	.05949	R	22,661
	MCNARY	2055	2080	1,029	1,029	.05864	R	1,029
	LOOKOUT POINT-DEXTER	2055	2080	39	39	.05864	R	39
	LOOKOUT POINT-DEXTER	2055	2080	605	605	.05864	R	605
	ALBENI FALLS	2055	2080	2,866	2,866	.05864	R	2,866
	LOWER GRANITE	2055	2075	40,279	40,279	.05778	R	40,279
	LOOKOUT POINT-DEXTER	2055	2075	85	85	.05778	R	85
	LOOKOUT POINT-DEXTER	2055	2075	497	497	.05778	R	497
	MCNARY	2055	2075	1,392	1,392	.05778	R	1,392
	ALBENI FALLS	2055	2075	1,052	1,052	.05778	R	1,052
	THE DALLES	2055	2067	10	10	.05641	R	10
	LOWER SNAKE F AND W	2055	2067	586	586	.05641	R	586
	LITTLE GOOSE	2055	2067	2,582	2,582	.05641	R	2,582

APPLICATION OF AMORTIZATION GENERATION FY 2006 REPAYMENT STUDY FOR 1999 INITIAL PR0POSAL

YEAR ---INVESTMENT PAID---

(ALL AMOUNT IN $1000)

YEAR	PROJECT	IN-SERVICE	DUE	GROSS	NET	RATE	REPLACEMENT	AMOUNT
+								
	LOWER GRANITE	2055	2065	1,003	1,003	.05607	R	1,003
	LOOKOUT POINT-DEXTER	2055	2065	123	123	.05607	R	123
	MCNARY	2055	2065	65,841	65,841	.05607	R	65,841
	ALBENI FALLS	2055	2065	1	1	.05607	R	1
	THE DALLES	2055	2063	80	80	.05571	R	80
	GREEN PETER-FOSTER	2055	2063	15	15	.05571	R	15
	LOWER GRANITE	2055	2063	36	36	.05571	R	36
	LOWER SNAKE F AND W	2055	2063	123	123	.05571	R	123
	COUGAR	2055	2062	3	3	.05554	R	3
	LITTLE GOOSE	2055	2062	26	26	.05554	R	26

	TOTAL							157,679
2056	LIBBY	2056	2096	17,632	17,632	.05949	R	17,632
	ICE HARBOR	2056	2096	4,879	4,879	.05949	R	4,879
	YAKIMA-CHANDLER	2056	2106	3,723	3,723	.05949	R	3,723
	YAKIMA-CHANDLER	2056	2081	1,062	1,062	.05864	R	1,062
	LIBBY	2056	2076	750	750	.05778	R	750
	YAKIMA-CHANDLER	2056	2076	99	99	.05778	R	99
	ICE HARBOR	2056	2076	219	219	.05778	R	219
	YAKIMA-CHANDLER	2056	2066	67	67	.05607	R	67
	LIBBY	2056	2066	77	77	.05607	R	77
	BONNEVILLE	2056	2061	72,812	72,812	.05488	R	72,812

	TOTAL							101,320
0	GRAND TOTAL							12,044,569
0	TOTAL DEFERRAL							0

0	NET							12,044,569